

CNTD®



# Smart Meter Division

CTN4 Intelligent Temperature Controller	D01-04
CME4 Modular Temperature Control Instrument	D05-08
CTI Current Monitoring Module	D09-10
CDT6-A/B Single-Function Time Relay	D11-13
CDT6-M Multifunctional Time Relay	D14-17
CDT6-EC Double Functional Time Relay	D18-20
CDT6-K Digital Set Time Relay	D21-23
CDT6-X Digital Display Time Relay	D24-26
CDT6-2T Dual Delay Type Time Relay	D27-29
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CDV6 Single-Phase Voltage Monitoring Relay	D39-41
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CDH Timer Relay	D51-54
CH6M/S Timing Counter	D55-58



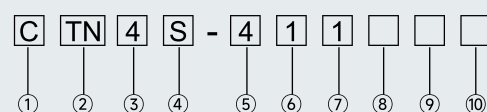




Features

- High-speed sampling
- AI artificial intelligence adjustment algorithm
- Dual PID heating and cooling intelligent adjustment
- AT automatic calculation function
- 16-bit MCU high-speed operation accuracy
- Dual digital display (PV / SV)
- High-speed sampling rate of 100ms and display accuracy of 0.5%
- SSR Drive output / Relay output / Current output optional
- Terminal type wiring method conducive to wiring and maintenance

Model Number Structure



Item	Code	Description
① Name of the company	C	CNTD
② Series	TE	Economical digital dual display PID temperature controller
	TN	Standard digital dual display PID temperature controller
	TZ	High precision digital dual display PID temperature controller
③ Digit	4	9999 (4 Digit)
④ Dimensions	S	48×48
	V	48×96
	M	72×72
	L	96×96
	H	96×48
⑤ Voltage supply	2	24VAC 50/60Hz, 24-48VDC
	4	Switch power supply(100-240V AC, 50HZ )
	A-Z	Custom power supply voltage
⑥ Control output	1	Relay
	2	Output
	3 □	Analog output: A: 0~20mA, 4~20mA, B: 0-5V, 1-5V
	4	Thyristor zero-crossing output
	5	Silicon controlled rectifier (5A)
	6	Relay output
A-Z	A-Z letter combination represents other or custom control output modes	

Item	Code	Description
⑦ Alarm output	1	Way relay
	2	Way relay
	3	1-way SSR
	4	1-way SSR
A-Z	A-Z letter combination represents other or custom control output modes	
⑧ Graduation	None	Thermocouple input K, E, J, L, T, R, S Thermal resistance input PT100, Cu50 (full function)
	A-Z	A-Z letter combination, representing other or customized alarm output
⑨ Transmission output	None	No such function
	T	With transmission output function
⑩ Graduation	None	No such function
	R	With RS485 communication function

Note 1: Analog output and transmission output cannot be selected at the same time;  
 Note 2: Due to the limited number of 48 \* 48 ports, the model selection cannot be fully met. Please contact the manufacturer if necessary;  
 Note 3: For 48x48 size, if 485 communication is required in the control output option, only 1/2/3 can be selected, not choose 6.

Electrical Specification

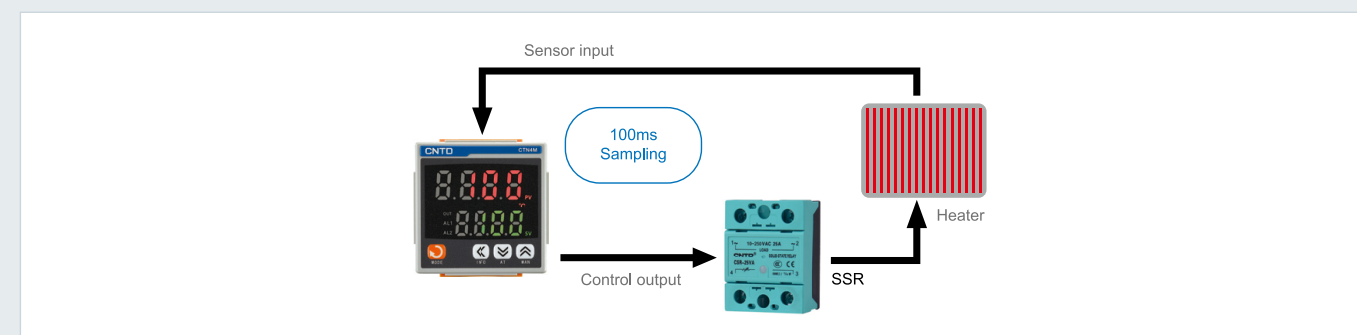
Rated voltage	100-240V AC, 50HZ
Power consumption	≤ 5VA
Rated voltage	Installation type II, Pollution degree 2
Storage Temperature	-25°C -65°C (Avoid freezing)
Resolution power	1°C, 0.1°C (Adjustable)
Wiring method	Connecting terminal
Measuring accuracy	±0.5%FS
Memory Protection	Non-volatile memory
Installation conditions	Installation type II, Pollution degree 2
Relay output	Relay contact: AC220V/DC30V,3A
Logic level output	On: DC24V; Off: dc0 Below 5V; Maximum current: 30mA, load resistance ≥ 1K

Overall dimension

Model		Shell size (length, width and height)	Hole size
CTN4S	48x48	48x48x71	45x45
CTN4V	48x96	48x96x71	46x92
CTN4H	96x48	96x48x71	91x45
CTN4M	72x72	72x72x71	68x68
CTN4L	96x96	96x96x71	92x92

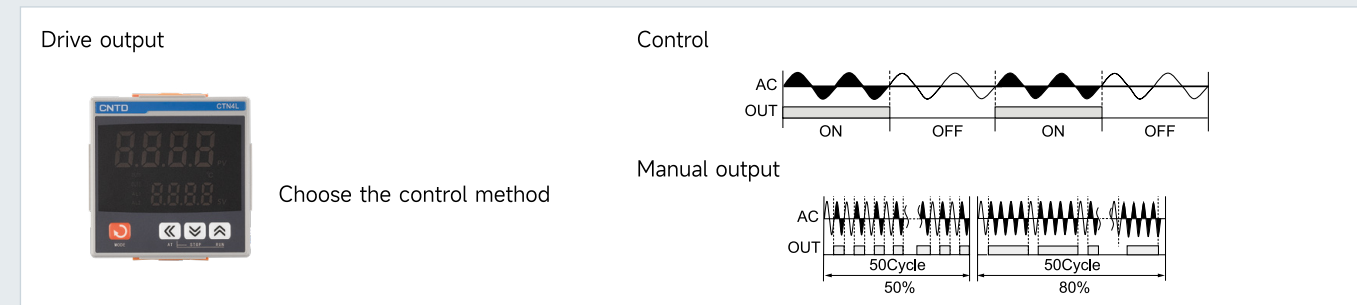
High speed sampling

100ms high-speed sampling rate enables precise temperature control in applications requiring fast response speed.



SSR drive output method

Users can choose SSR and RELAY drive output. On this basis, ON/OFF control and manual output are added to achieve ideal temperature control.

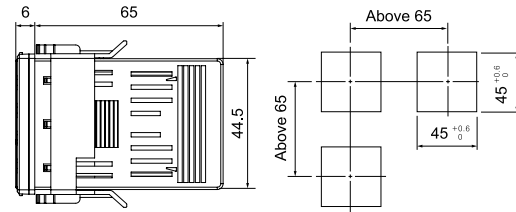




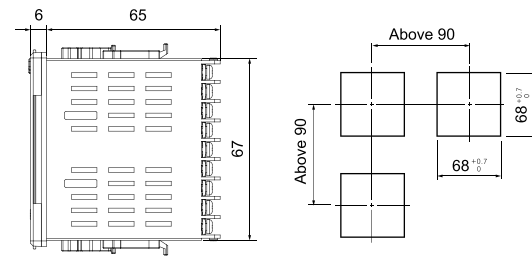


Appearance and Dimension

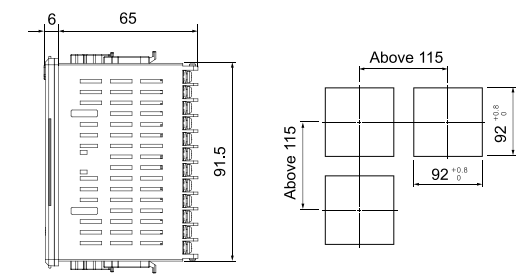
CTN4S  
48×48mm



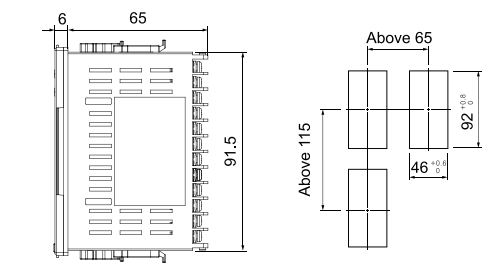
CTN4M  
72×72mm



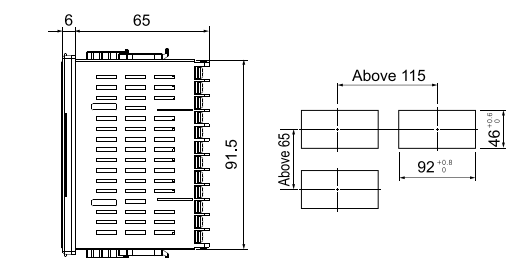
CTN4L  
96×96mm



CTN4V  
48×96mm



CTN4H  
96×48mm



- First display (PV)  
Display measured value  
Display various prompts according to the instrument status
- Second display(SV)  
Display given value  
Display various parameter according to the instrument status
- Action directive  
OUT: Heating indicator, light on when it is operating  
ALM1: Deviation high-limit alarm, light on when it is alarming  
ALM2: Deviation low-limit alarm, light on when it is alarming
- Plus key (▲)  
Increase the adjustment value  
Manual mode access key  
Menu parameter switch key
- Minus key (▼)  
Decrease the adjustment value  
Auto-tuning state enter key  
Menu parameter switch key
- INFO key  
Status information view enter key
- Function key (Mode)  
Main menu and submenu access key  
Parameter modification and confirmation key



Please scan the QR code for detailed usage parameters

Application scenario



Printing machines



Ceramic machinery



Rubber Machinery



Packaging Machinery



Injection molding machine



Food Machinery

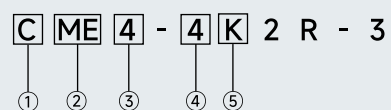




Overview

■ The modular temperature control instrument is a special equipment for heating and cooling control launched by our company. It has the function of controlling multiple heating channels separately, and has the characteristics of high integration, accurate temperature control, compact size, and easy installation. It is widely used in packaging machinery, hot runner, production line and other occasions where temperature heating control is required.

Product selection



Features

- With multi-channel temperature control function, one module is equivalent to multiple temperature control meters, and the temperature control parameters of each channel are independent and do not affect each other.;
- Multi-channel intelligent temperature control algorithm, can achieve 4-channel accurate PID temperature control, can be widely used in a variety of heating models;
- With RS485 communication interface, standard modbus RTU communication protocol, easy to communicate with PLC or configuration screen, online monitoring of temperature data, real-time control by the host equipment;
- Modular structure design, optional multi-module splicing method, multiple temperature control modules are spliced through the side quick socket to achieve the effect of doubling the number of channels, multiple 4-channel modules can be spliced into 8-channel, 16-channel and more temperature control channels;
- The product has a high degree of integration and compact size. The rail-type installation method is suitable for installation places such as on-site control cabinets and power distribution cabinets.;

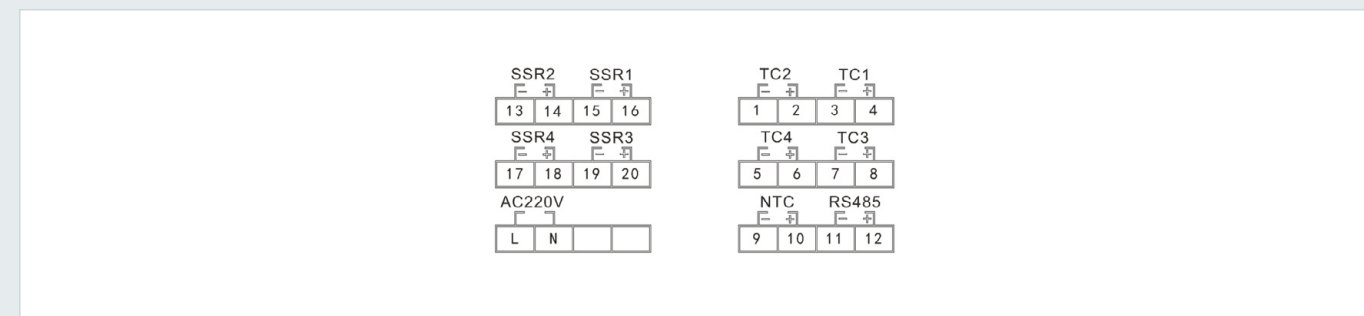
① Company name	C	CNTD
② Series	ME	Standard modular thermostat
	MH	High-precision modular thermostat
③ Number of channels	1	Single channel
	2	Dual channel
	4	Four channels
	8	Eight channels
④ Power supply voltage	12	Twelve channels
	2	24V AC 50/60Hz, 18-32VDC
	4	100-240V AC, 50/60Hz
⑤ Temperature input	K	Thermocouple (K, E, J, L, T, R, S)
	P	Thermal resistance input (PT100, Cu50)
	A	4-20mA input
⑥ Control output	1	Relay
	2	SSR output
	A	0-20mA, 4-20mA
⑦ Communication	B	0-5V, 1-5V
	N	No communication output
	R	RS485 communication
⑧ Combination quick connection interface	None	No quick connection
	1	Quick connect input on the left
	2	Quick connect output on the right
	3	Left and right quick connection input and output

Technical parameters

Rated voltage	100-240V AC, 50Hz
Power consumption	≤5VA
Working environment	Ambient temperature: 0°C -50°C Relative humidity: 35%-85% (no condensation)
Storage temperature	-25°C -65°C (avoid freezing or condensation)
Resolution	1°C, 0.1°C (adjustable)
Wiring method	Terminal block
Detection accuracy	±0.5%FS
Memory protection	Non-volatile memory
Relay output (If the control output is a relay)	Relay contact AC220V/DC30V, 3A
Relay logic level output (If the control output is SSR)	When ON: DC12V; when OFF: below DC0.5V; Maximum current: 30mA, load resistance ≥ 1K
Thermocouple input type	K, E, J, L, T, R, S
Thermal resistance input type	PT100, Cu50

Wiring

Please refer to the wiring diagram on the side of the modular thermostat for the wiring method. The following is the explanation of the terms on the wiring diagram.:

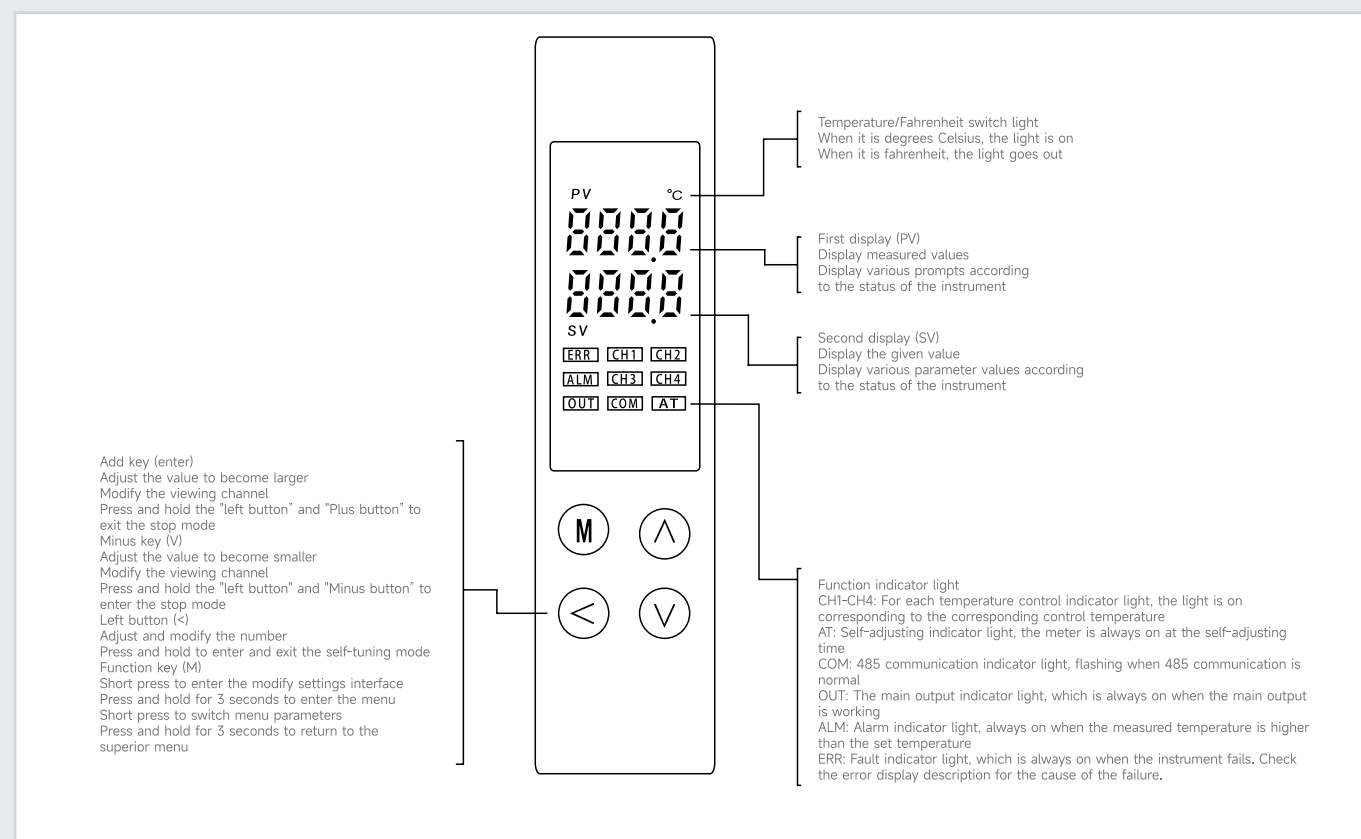


L, N	Thermostat AC220V power supply input interface, can not be divided into zero line, firewire
NTC	External cold terminal detection, can be connected to the included cold terminal resistor, the port does not distinguish between positive and negative. If the external cold terminal resistor is not connected, the internal cold terminal is automatically used
RS485	485 communication interface, you need to distinguish between positive and negative electrodes, A+, B-
TC1	The thermocouple input signal of channel 1, the positive and negative electrodes need to be distinguished
SSR1	The solid-state drive signal output of channel 1, the positive and negative electrodes need to be distinguished
AIN1	The analog input of channel 1, the default is 4-20mA signal, the positive and negative electrodes need to be distinguished
AOUT1	The analog output of channel 1, the default is 4-20mA signal, the positive and negative electrodes need to be distinguished

Note: TC1 is a channel 1 thermocouple, TC2 is a channel 2 thermocouple, and so on. SSR, AIN, and AOUT also follow this rule.



Control panel function description



ALM alarm parameter definition

Alarm code	Alarm form	Description
0	No alarm	No alarm output
1	Absolute upper limit alarm	Alarm when PV>ALUP
2	Alarm at the lower absolute value	Alarm when PV<ALDN
3	Deviation upper limit alarm	Alarm when PV>SV+ALUP
4	Alarm of the lower deviation limit	Alarm when PV<SV-ALDN
5	Alarm within the absolute value range	Alarm when PV<ALUP>PV>ALDN
6	Alarm outside the absolute value range	Alarm when PV>ALUP or PV<ALDN
7	Alarm within the deviation range	Alarm when PV<SV+ALUP and when PV>SV-ALDN
8	Alarm outside the deviation range	Alarm when PV>SV+ALUP or when PV<SV-ALDN
9	Absolute upper limit alarm (hold)	Alarm when PV>ALUP
10	Alarm at the lower absolute value (hold)	Alarm when PV<ALDN
11	Deviation upper limit alarm (hold)	Alarm when PV>SV+ALUP
12	Alarm of the lower limit of deviation (hold)	Alarm when PV<SV-ALDN

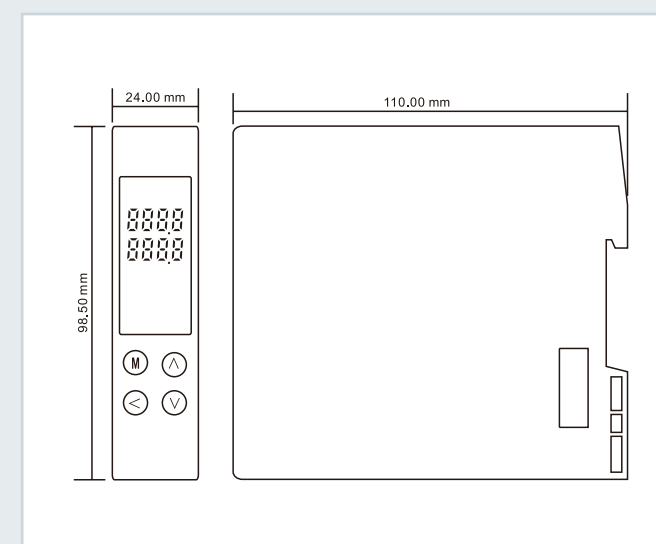
Note: "Hold" means power-on and power-on alarm elimination: If the thermostat is in an alarm state as soon as it is turned on, the alarm will not be carried out. The temperature control must be put into a normal state first, and the alarm condition will be reached again before the alarm will be carried out.

Enter the indexing number type selection

	Input type	Symbol	Temperature measurement range
Thermocouple	K	inPE	-60-1200
	E	inPE	-60-950
	J	inPJ	-60-1150
	L	inPL	0-800
	T	inPE	-60-350
	R	inPr	0-1700
	S	inPS	0-1600

	Input type	Symbol	Temperature measurement range
Thermal resistance	PT100	PE	-60-600
	CU	CU	-60-150

Dimensional diagram







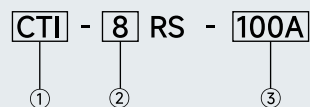
Overview

■ CTI series current monitoring module is a multi-channel AC current real-time monitoring and acquisition module. By collecting the signal waveform of a high-precision current transformer, the built-in 32-bit high-performance main control unit calculates the effective current value in real time, and can realize a variety of alarm logic according to user settings. Using RS-485 communication bus, data transmission is carried out through the standard MODBUS-RTU protocol.

Features

- Independent high-precision sampling of each channel;
- Has a variety of alarm logic judgment modes;
- Wide operating voltage, compatible with DC12-28V power supply;
- Sufficient threading spacing is reserved between the transformers to facilitate wiring maintenance;
- High-stability design, long-term operation without manual intervention;

Product selection

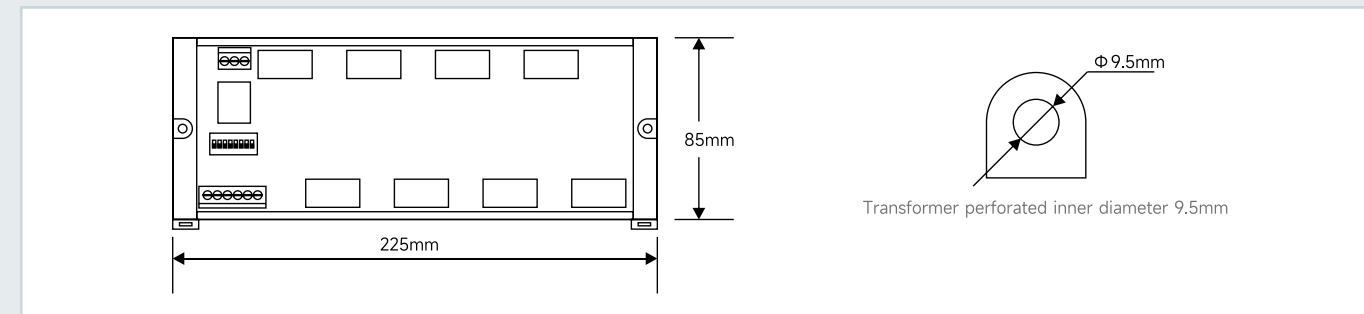


No	Item	Description
①	CTI	Current module
②	8	Number of current detection channels 4: Four-way 6: Six ways 8: Eight ways
③	100A	Upper range limit

Technical parameters

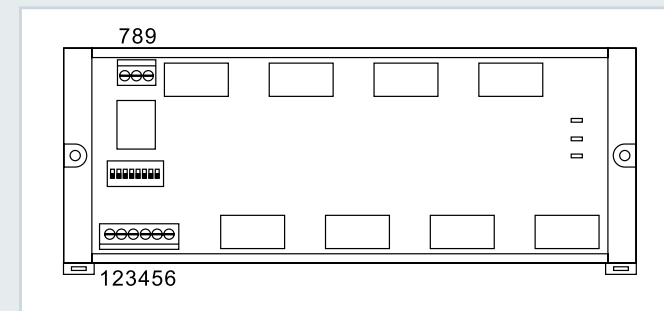
Supply voltage: DC12-28V	Power consumption: ≤1.5W
Working temperature: -20°C ~ 50°C	Working humidity: 15%-90% (no condensation)
Detection resolution: 0.1A	Basic error: ±1%FS
Sampling period: 100ms	Overcurrent capacity: range 150%
Input signal: 9~30V	Relay contact: AC220V/DC30V, 3A
Range range: 50A, 100A	

Dimensions



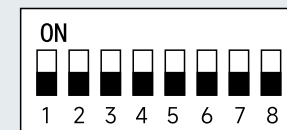
Terminal definition

- Terminal 1: the positive electrode of the module's power supply
- Terminal 2: Negative electrode of module power supply
- Terminal 3: RS485+
- Terminal 4: RS485-
- Terminal 5: Input signal INA
- Terminal 6: Input signal INB
- Terminal 7: Normally closed terminal of relay
- Terminal 8: Common terminal of relay
- Terminal 9: Relay normally open



Note: The input signal is internally bidirectional optocoupler, as long as a 12V or 24V voltage is connected between INA and INB, there is no need to distinguish between positive and negative electrodes.

Dial code setting



The 8th bit of the dial code of the current monitoring module is used to select the communication parameters. When the 8th dial code is set to ON, the communication baud rate is 9600, and 8N1 has no verification. At this time, the communication address is determined by dialing code 1-dialing code 7. We regard dialing code ON as a value of 1 and dialing code OFF as a value of 0.: Mailing address = Dial code 1+ (dial code 2×2) + (dial code 3×4) + (dial code 4×8) + (dial code 5×16) + (dial code 6×32) + (dial code 7×64)  
If the 8th bit dial code is set to OFF, the communication address, baud rate, parity bit and other parameters are determined by the registers 202, 203, and 204 (see register definition for details)  
Note: After adjusting the communication parameters, the module needs to be restarted to take effect!

Indicator light description

There are three indicators on the right side of the module to identify the working status.  
RUN: Running state, long light indicates that the alarm is allowed, and the alarm judgment is prohibited when the short flicker is on;  
COM: Communication status, flashing during communication;  
ALARM: Alarm status, there is an alarm for a long time to light up;





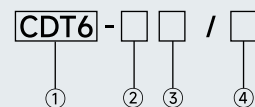
### Application

- Delay the connection or disconnection of the line, such as controlling the power-on time of the heating element, the working time of the water pump, and the delay disconnection of the fan.

### Features

- Cost-effective, single-function time relay, the delay can be set directly through the panel knob, which is convenient and intuitive.
- 2 function modes are optional:  
A: Power-on delay  
B: Delay disconnection
- It has 1 set of delay, 2 sets of delay, 1 set of delay + 1 set of transient specifications are optional.
- Ultra-wide delay range, 0.1 seconds-10 days can be set (10 gears).
- It has AC/DC12V-240V ultra-wide operating voltage specifications to choose from.
- The working status of the relay is indicated by an LED indicator.
- Ultra-small size, only 18mm width, 35mm card rail installation.

### Product selection



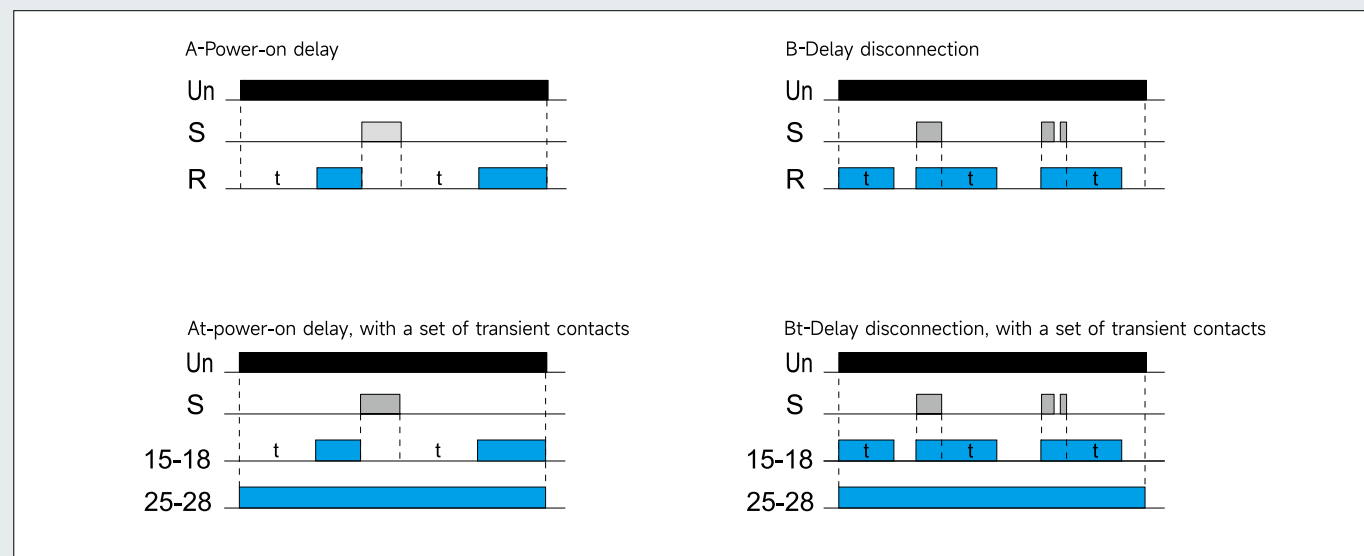
No	Item	Description
①	CDT6 series time relay	-
②	Delay function	A: Power-on delay; B: Delay disconnection;
③	Number of output contact groups	1: 1 set of conversion; 2: 2 sets of conversion; t: 1 set of delay + 1 set of transient
④	Rated operating power supply voltage	A220:AC230V; W240:AC/DC12V-240V;

### Technical parameters

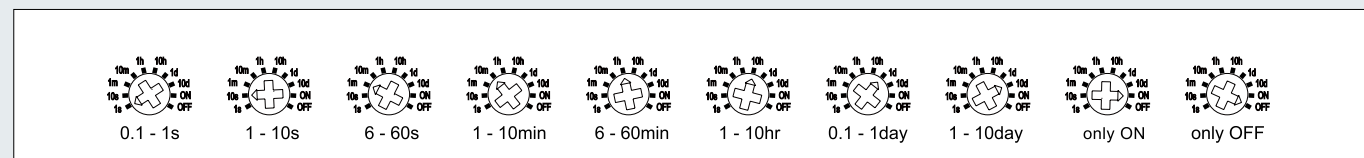
	CDT6-A1/B1	CDT6-A2/B2	CDT6-At/Bt
Function	Type A: power-on delay; type B: delay disconnection		
Power terminal	A1-A2		
Rated control power supply voltage	AC/DC 12-240V(50-60Hz)		
Power consumption	AC 0.09-3VA/DC 0.05-1.7W		
Rated control power supply voltage	AC 220V(50-60Hz)		
Power consumption	AC max.6VA/1.3W	AC max.6VA/1.9W	
Allowable fluctuation range of power supply	-15%;+10%		
Power indicator	Green LED		
Delay range	0.1 seconds-10 days, normally open, normally closed		
Setting method	knob		
Setting accuracy	10%		
Repeatability	0.2%		
Temperature fluctuation error	0.05%°C ,at=20°C		
Output contact parameters	1 set of conversions	2 sets of conversions	1 set of delay + 1 set of transient
	1×16A(AC1)	2×16A(AC1)	
	250VAC/24VDC		
Minimum switching power	500mW		
Output relay indication	Red LED		
Mechanical life	1×10 <sup>7</sup>		
Electrical life (resistive load)	1×10 <sup>5</sup>		
Reset time	Maximum 200ms		
Operating ambient temperature	-20°C ~+55°C		
Storage and transportation ambient temperature	-35°C ~+75°C		
Installation method	35mm Card rail installation		
Protection level	IP20		
Installation location	Arbitrary		
Installation altitude	≤ 2000m		
Pollution level	2		
Wiring ability	1×2.5mm <sup>2</sup> or 2×1.5mm <sup>2</sup> 0.4N·m		
Dimensions	90mm×18mm×65mm		
Weight	67g	80g	
Meet the standard	GB/T 14048.5,IEC60947-5-1,EN 61812-1		



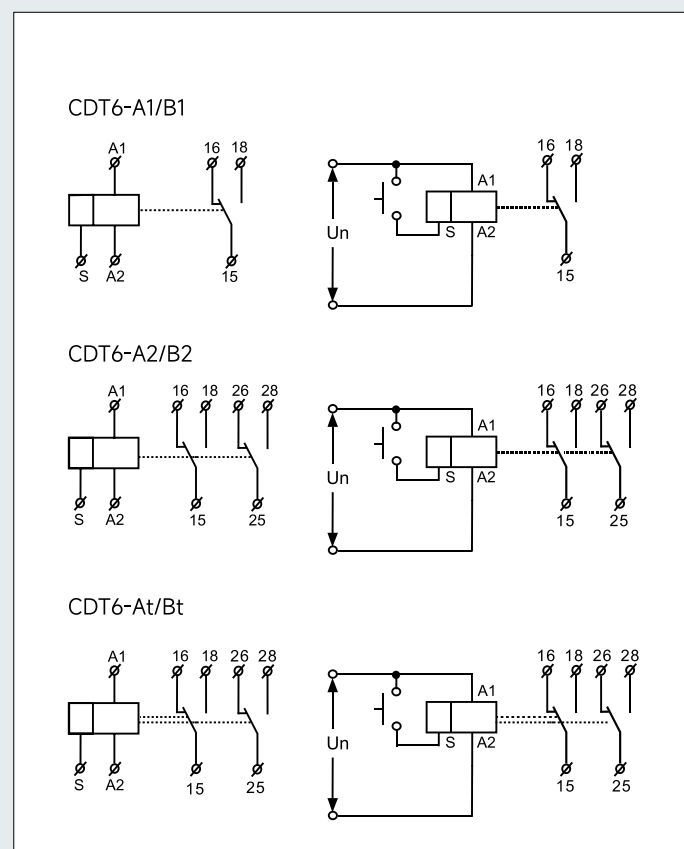
### Function diagram



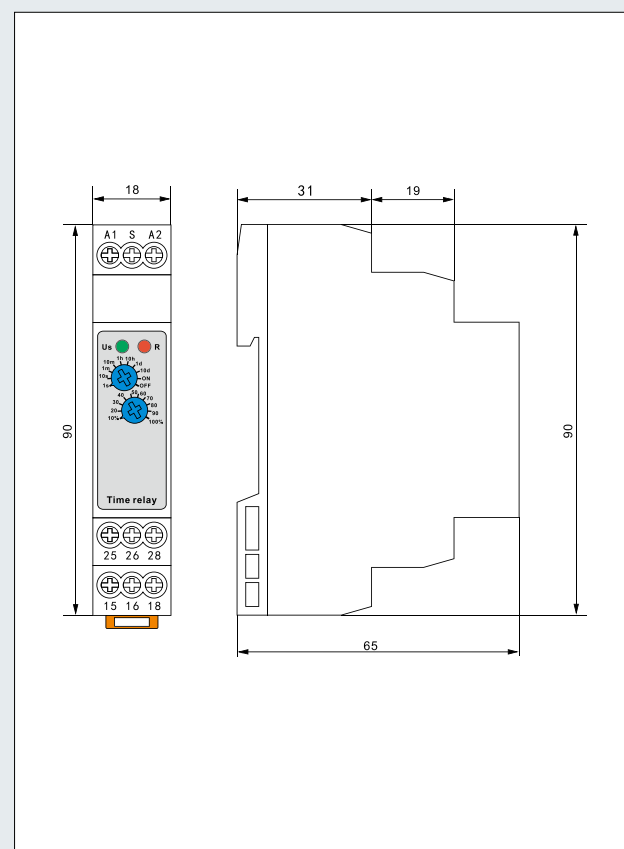
### Delay setting



### Wiring diagram



### Shape and size (mm)



### Application

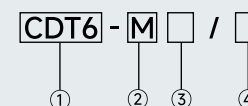
- The multi-function time relay can be used for industrial equipment, lighting control, heating element control, motor, and fan control. It has 10 delay modes and the delay range covers 0.1 seconds to 10 days.

### Features

- 10 kinds of delay modes:
  - 5 kinds of delay modes controlled by power supply
  - 4 delay modes controlled by signal
  - 1 pulse conversion modes
- Ultra-wide delay range, 0.1 seconds-10 days can be set (10 gears).
- It has AC/DC12V-240V ultra-wide operating voltage specifications to choose from.
- The working status of the relay is indicated by an LED indicator.
- Ultra-small size, only 18mm width, 35mm card rail installation.



### 产品选型 Product selection



No	Item	Description
①	CDT6 series time relay	-
②	Multifunctional time relay	-
③	Number of output contact groups	1: 1 group conversion; 2: 2 group conversion;
④	Rated operating power supply voltage	A220:AC230V; W240:AC/DC12V-240V;



Technical parameters

	CDT6-M1	CDT6-M2
Function	A,B,C,D,E,F,G,H,I,J	
Power terminal	A1-A2	
Rated control power supply voltage	AC/DC 12-240V(50-60Hz)	
Power consumption	AC 0.09-3VA/DC 0.05-1.7W	
Rated control power supply voltage	AC 220V(50-60Hz)	
Rated control power supply voltage	AC max.6VA/1.3W	AC max.6VA/1.9W
Allowable fluctuation range of power supply	-15%+10%	
Power indicator	Green LED	
Delay range	0.1 seconds-10 days, normally open, normally closed	
Setting method	knob	
Setting accuracy	10%	
Repeatability	0.2%	
Temperature fluctuation error	0.05%°C ,at=20°C	
Output contact parameters	1 set of conversions	2 sets of conversions
	1×16A(AC1)	2×16A(AC1)
	250VAC/24VDC	
Minimum switching power	500mW	
Output relay indication	Red LED	
Mechanical life	1×10 <sup>7</sup>	
Electrical life (resistive load)	1×10 <sup>5</sup>	
Reset time	Maximum 200ms	
Operating ambient temperature	-20°C ~+55°C	
Storage and transportation ambient temperature	-35°C ~+75°C	
Installation method	35mm Card rail installation	
Protection level	IP20	
Installation location	Arbitrary	
Installation altitude	≤ 2000m	
Pollution level	2	
Wiring ability	1×2.5mm <sup>2</sup> or 2×1.5mm <sup>2</sup> 0.4N·m	
Dimensions	90mm×18mm×65mm	
Weight	67g	80g
Meet the standard	GB/T 14048.5,IEC60947-5-1,EN 61812-1	

Function diagramw

**A: Power-on delay**  
When the relay Un gets power, the relay starts to delay, and the output contact is closed after the delay T. After the relay Un is powered off, the output contact is disconnected, and the S control signal is invalid in this functional mode.

**F: Delay disconnection (the rising edge of S triggers the start)**  
When the relay Un is in the energized state, when the S control terminal is turned on, the relay is closed. At the same time, the relay starts to delay. After the delay t, the output contact is disconnected. During the delay t, the S control terminal is turned on and off again, and the delay t remains unchanged. Continue to delay.

**B: Delay disconnection**  
When the relay Un gets power, the output contacts of the relay are immediately closed and the delay begins. After the delay t, the output contacts are disconnected. If the delay time t does not reach the relay Un loses power, the output contacts are disconnected, and the S control signal is invalid in this functional mode.

**G: S falling edge triggers closure, delay disconnection**  
When the relay Un is in the energized state, when the S control terminal is disconnected, the relay is closed. At the same time, the relay starts to delay. After the delay t, the output contact is disconnected. During the delay t, the S control terminal is turned on and off again, and the delay t remains unchanged. Continue to delay.

**C: Cycle delay (START OFF)**  
When the relay Un gets power, the relay starts to delay, and the output contact is closed after the delay t, and at the same time, the relay output contact is disconnected after the delay time t, and so on. The cycle is delayed until the relay Un loses power, and the S control signal is invalid in this functional mode.

**H: On-off delay**  
When the relay Un is in the energized state, when the S control terminal is turned on, the relay starts to delay, and the output contact is closed after the delay T. When the S control terminal is disconnected, the relay starts to delay, and the output contact is disconnected after the delay T.

**D: Cycle delay (ON start)**  
When the relay Un gets power, the relay is closed and the delay begins. After the delay t, the output contact is disconnected. At the same time, the relay output contact is closed after the delay time t, and so on. The cycle is delayed until the relay Un loses power, and the S control signal is invalid in this functional mode.

**I: Pulse conversion**  
When the relay Un is in the energized state, when the S control terminal is turned on, the state of the relay output contact transitions.

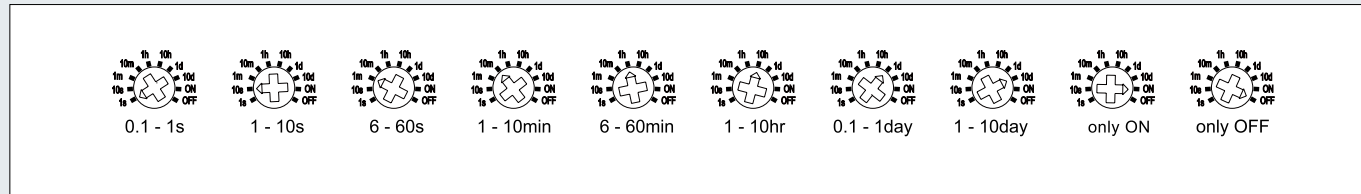
**E: Delay disconnection (the falling edge of S triggers the start)**  
When the relay Un is in the energized state, when the S control terminal is turned on, the relay is closed, and when the S control terminal is disconnected, the relay starts to delay. After the delay t, the output contact is disconnected. During the delay t, the S control terminal is turned on again, and the delay t is cleared to re-delay.

**J: Pulse output**  
When the relay Un is powered up, the relay starts to delay. After the delay time t arrives, the relay output contact is closed for 0.5s and disconnected.

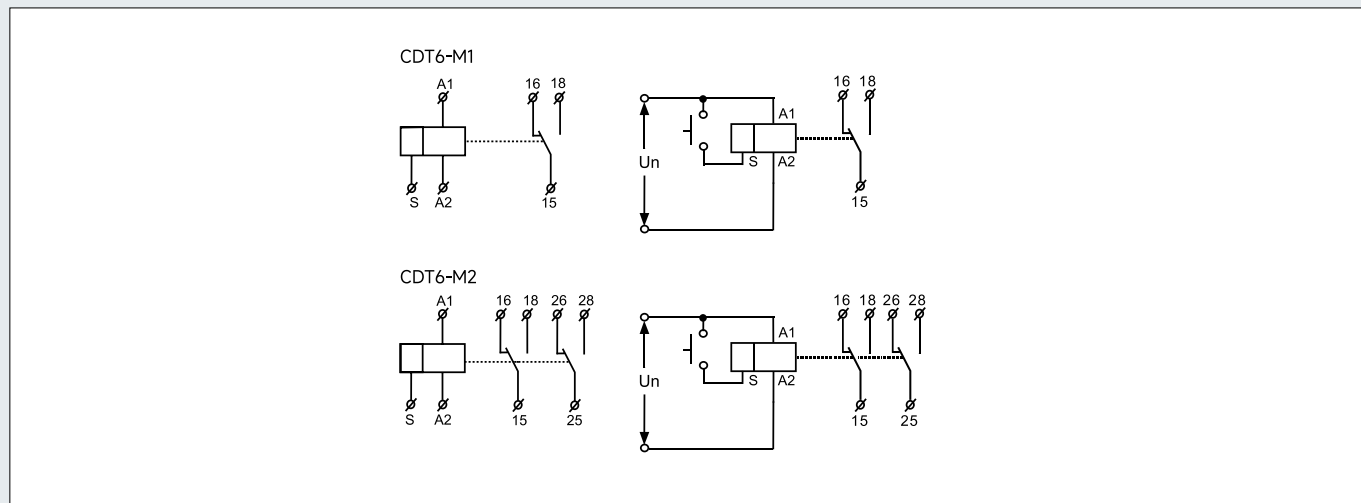
PULS = 0.5 s



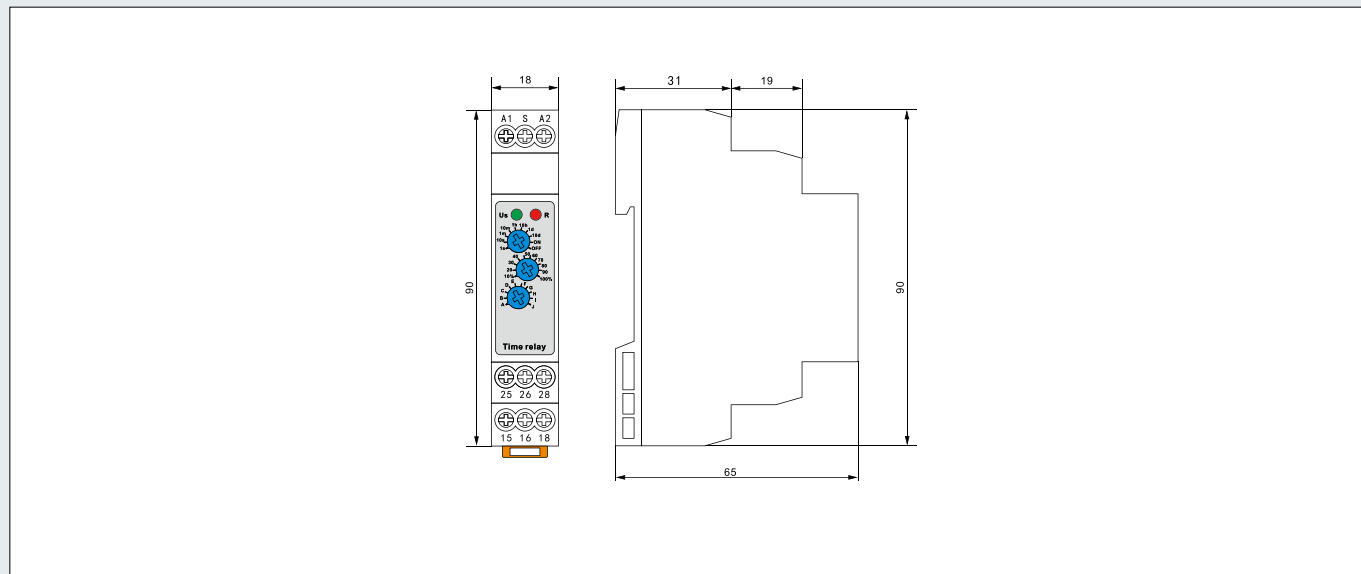
Delay setting



Wiring diagram



Shape and size (mm)



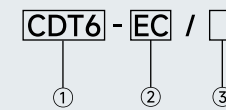
Application

- The dual-function time relay can be used for industrial equipment, lighting control, heating element control, motor, and fan control. It has 2 delay modes, and the delay range covers 0.1 seconds to 10 days.

Features

- 2 delay modes can be set.
- At the same time, it supports two operating voltages, AC220V/DC24V.
- Ultra-wide delay range, 0.1 seconds-10 days can be set.
- The working status of the relay is indicated by an LED indicator.
- Ultra-small size, only 18mm width, 35mm card rail installation.

Product selection



No	Item	Description
①	CDT6 series time relay	-
②	Dual-function economical time relay	-
③	Rated operating power supply voltage	A220:AC220V;

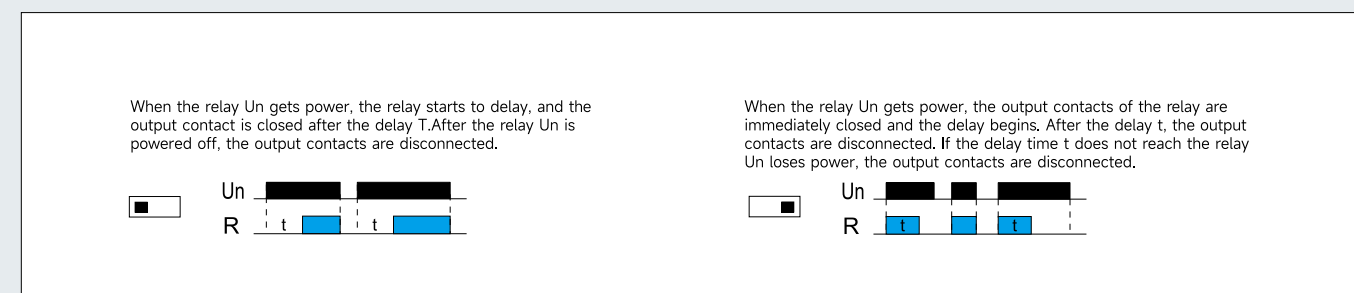




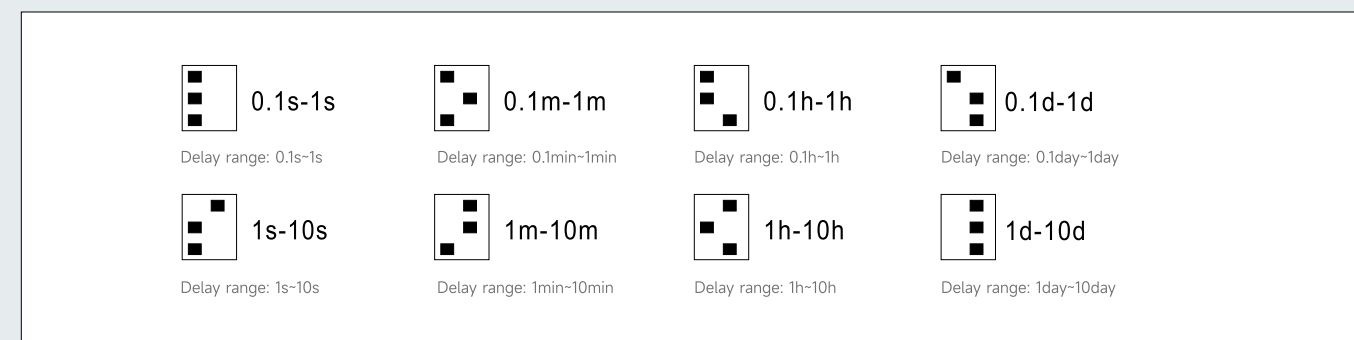
Technical parameters

	CDT6-EC
Function	Power-on delay, delay disconnection
Power terminal	A1-A2
Rated control power supply voltage	AC220V(50-60Hz),DC24V
Power consumption	AC 3VA/DC 0.5W
Allowable fluctuation range of power supply	-15%;+10%
Power indicator	Green LED
Delay range	0.1 seconds-10 days
Setting method	Dial code + knob setting
Setting accuracy	5%
Repeatability	0.2%
Temperature fluctuation error	0.05%/°C ,at=20°C
Output contact parameters	1 set of conversion contacts
	Ith: 10A;AC-15;Ue/Ie:250V/2.5A
Minimum switching power	500mW
Output relay indication	Red LED
Mechanical life	1×10 <sup>7</sup>
Electrical life (resistive load)	1×10 <sup>5</sup>
Reset time	Maximum 200ms
Operating ambient temperature	-20°C ~+55°C
Storage and transportation ambient temperature	-35°C ~+75°C
Installation method	35mm Card rail installation
Protection level	IP20
Installation location	Arbitrary
Installation altitude	≤ 2000m
Pollution level	2
Wiring ability	1×2.5mm <sup>2</sup> or 2×1.5mm <sup>2</sup> 0.4N·m
Dimensions	90mm×18mm×65mm
Weight	67g
Meet the standard	GB/T 14048.5,IEC60947-5-1,EN 61812-1

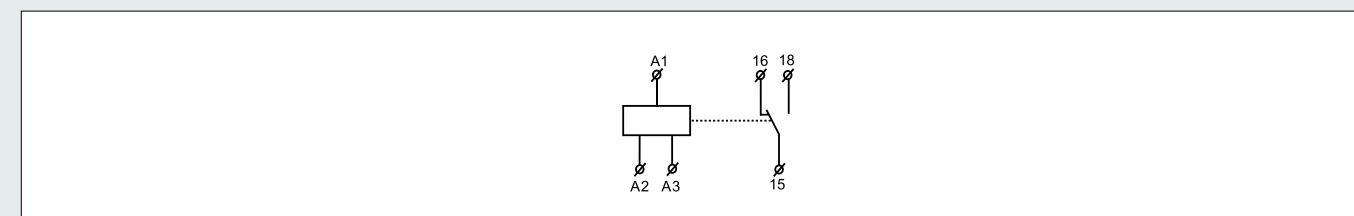
Function diagramw



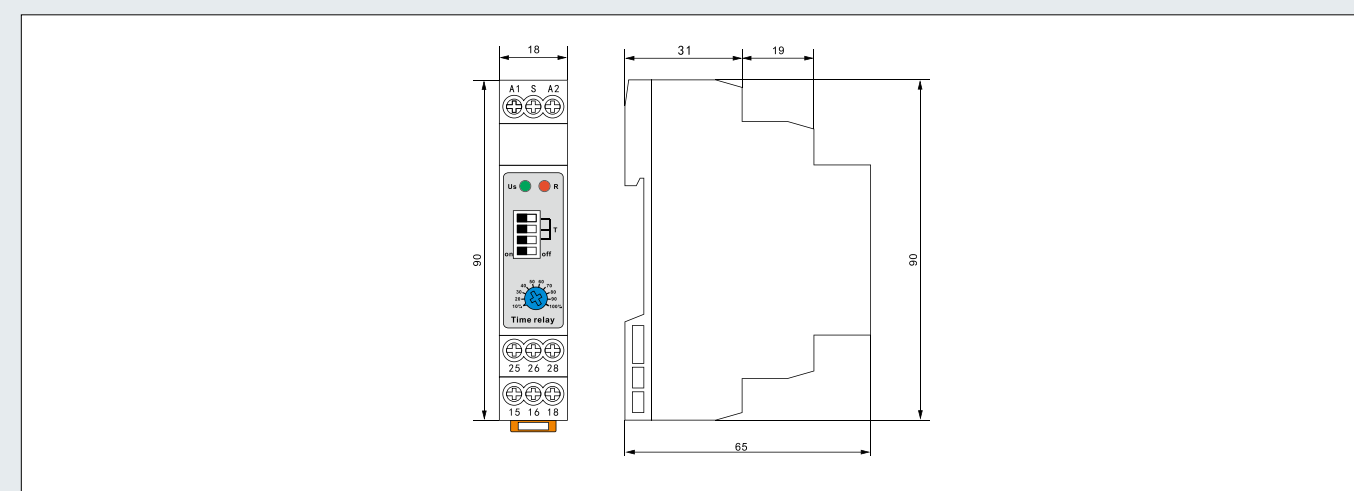
Delay setting



Wiring diagram



Shape and size (mm)





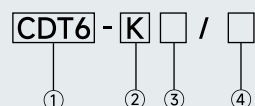
**Application**

- The multi-function time relay with digital setting can be used for industrial equipment, lighting control, heating element control, motor, and fan control. It has 4 delay modes and the delay range covers 0.1 seconds to 99 hours.

**Features**

- 4 delay modes can be set.
- Through the digital dial code setting, the setting is more accurate.
- Ultra-wide delay range, 0.1 seconds-99 hours can be set.
- With AC/DC12V-240V ultra-wide operating voltage specifications are optional.
- The working status of the relay is indicated by the LED indicator.
- Ultra-small size, only 18mm width, 35mm card rail installation.

**Model Designation**



No	Item	Description
①	CDT6 series time relay	-
②	Digital set time relay	-
③	Number of output contact groups	1: 1 group conversion; 2: 2 group conversion;
④	Rated operating power supply voltage	A220:AC230V; W240:AC/DC12V-240V;

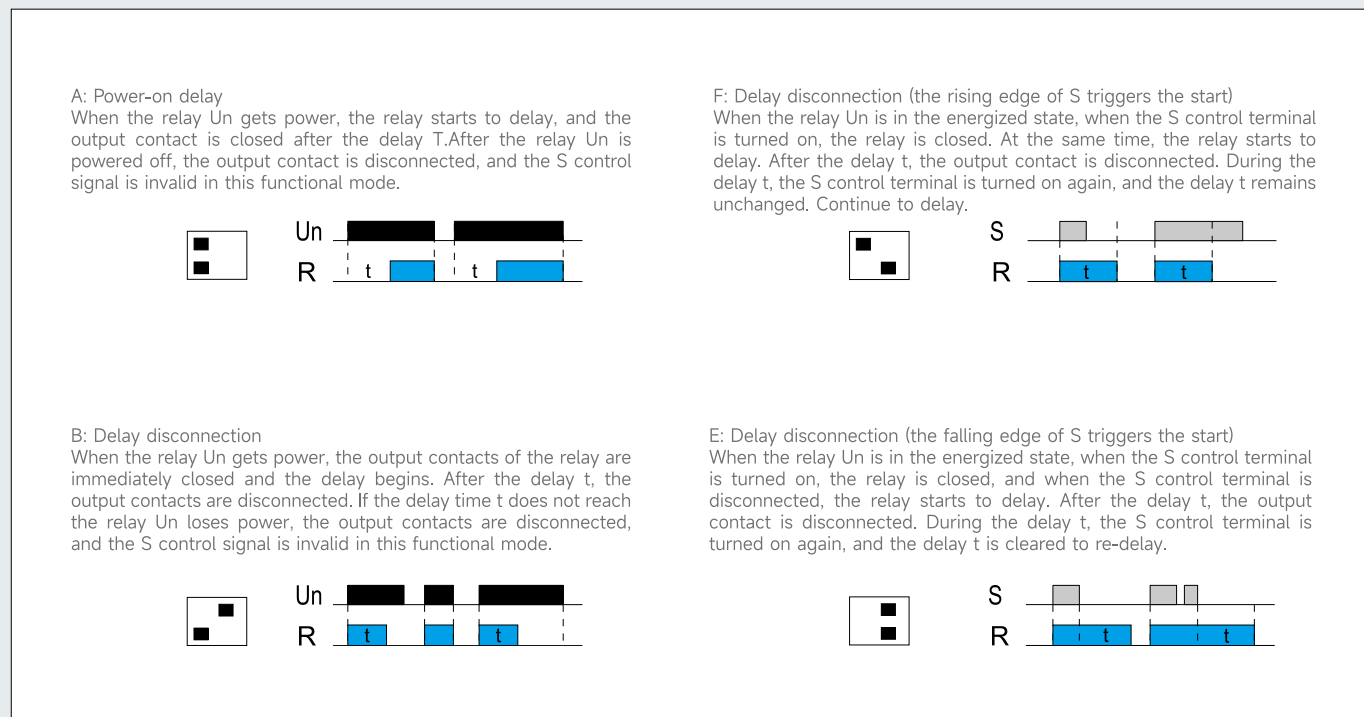
**Technical parameters**

	CDT6-K1	CDT6-K2
Function	A,B,E,F	
Power terminal	A1-A2	
Rated control power supply voltage	AC/DC 12-240V(50-60Hz)	
Power consumption	AC 0.09-3VA/DC 0.05-1.7W	
Rated control power supply voltage	AC 220V(50-60Hz)	
Power consumption	AC max.6VA/1.3W	AC max.6VA/1.9W
Allowable fluctuation range of power supply	-15%;+10%	
Power indicator	Green LED	
Delay range	0.1 seconds-99 hours, normally open, normally closed	
Setting method	Digital dial code setting	
Setting accuracy	1%	
Repeatability	0.2%	
Temperature fluctuation error	0.05%/°C ,at=20°C	
Output contact parameters	1 set of conversion contacts	2 sets of conversion contacts
	1×16A(AC1)	2×8A(AC1)
	250VAC/24VDC	
Minimum switching power	500mW	
Output relay indication	Red LED	
Mechanical life	1×10 <sup>7</sup>	
Electrical life (resistive load)	1×10 <sup>5</sup>	
Reset time	Maximum 200ms	
Operating ambient temperature	-20°C ~+55°C	
Storage and transportation ambient temperature	-35°C ~+75°C	
Installation method	35 mm card rail installation	
Protection level	IP20	
Installation location	Arbitrary	
Installation altitude	≤ 2000m	
Pollution level	2	
Wiring ability	1×2.5mm <sup>2</sup> or 2×1.5mm <sup>2</sup> 0.4N·m	
Dimensions	90mm×18mm×65mm	
Weight	67g	80g
Meet the standard	GB/T 14048.5,IEC60947-5-1,EN 61812-1	

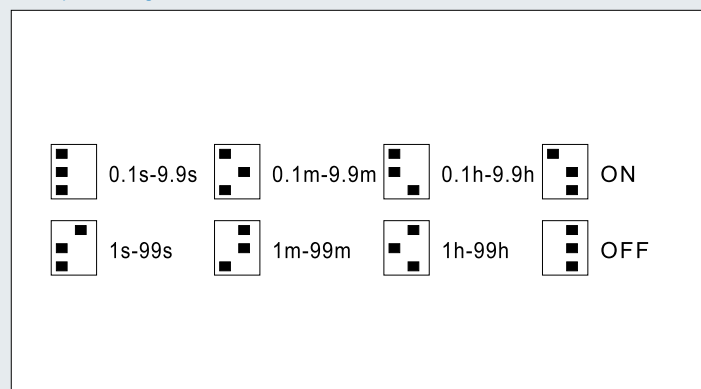




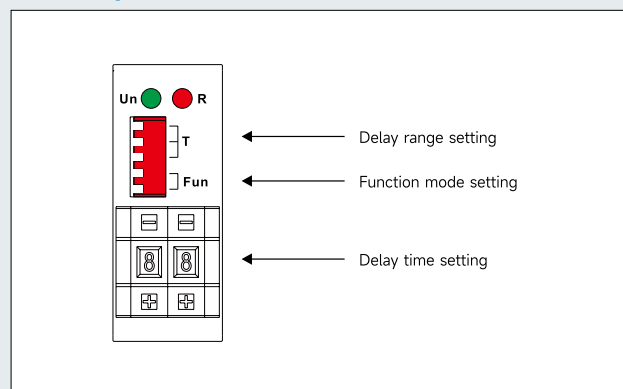
### Function diagramw



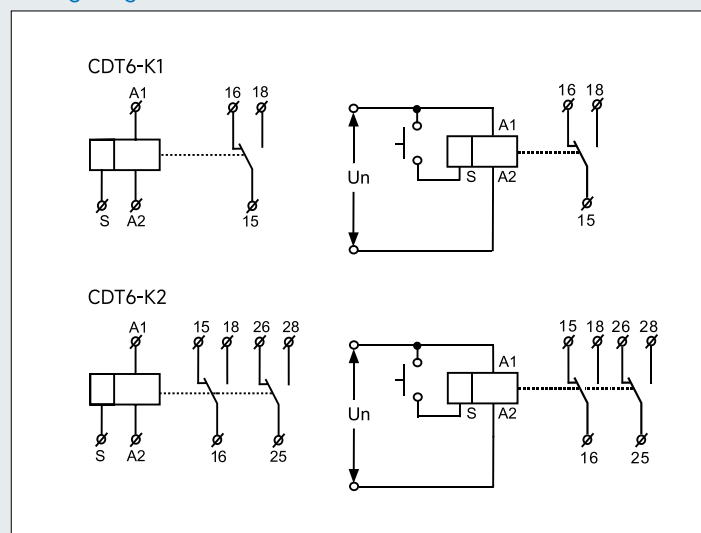
### Delay setting



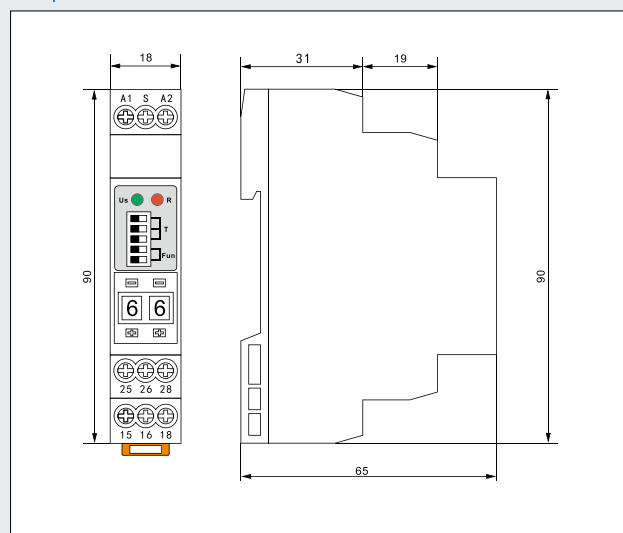
### Panel diagram



### Wiring diagram



### Shape and size (mm)



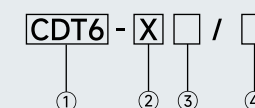
### Application

- The multi-function time relay can be used for industrial equipment, lighting control, heating element control, motor, and fan control. It has 20 delay modes, and the delay range covers 0.1 seconds to 99 days.

### Features

- 20 kinds of delay modes:
  - 5 kinds of delay modes controlled by power supply
  - 13 delay modes controlled by signal
  - ON, OFF mode
- Ultra-wide delay range, 0.1 seconds-99 days can be set.
- It has an ultra-wide operating voltage of AC/DC 12V-240V.
- The working status of the relay is indicated by an LED indicator.
- The ultra-small size is only 18mm wide, and the 35mm card rail is installed.

### Product selection

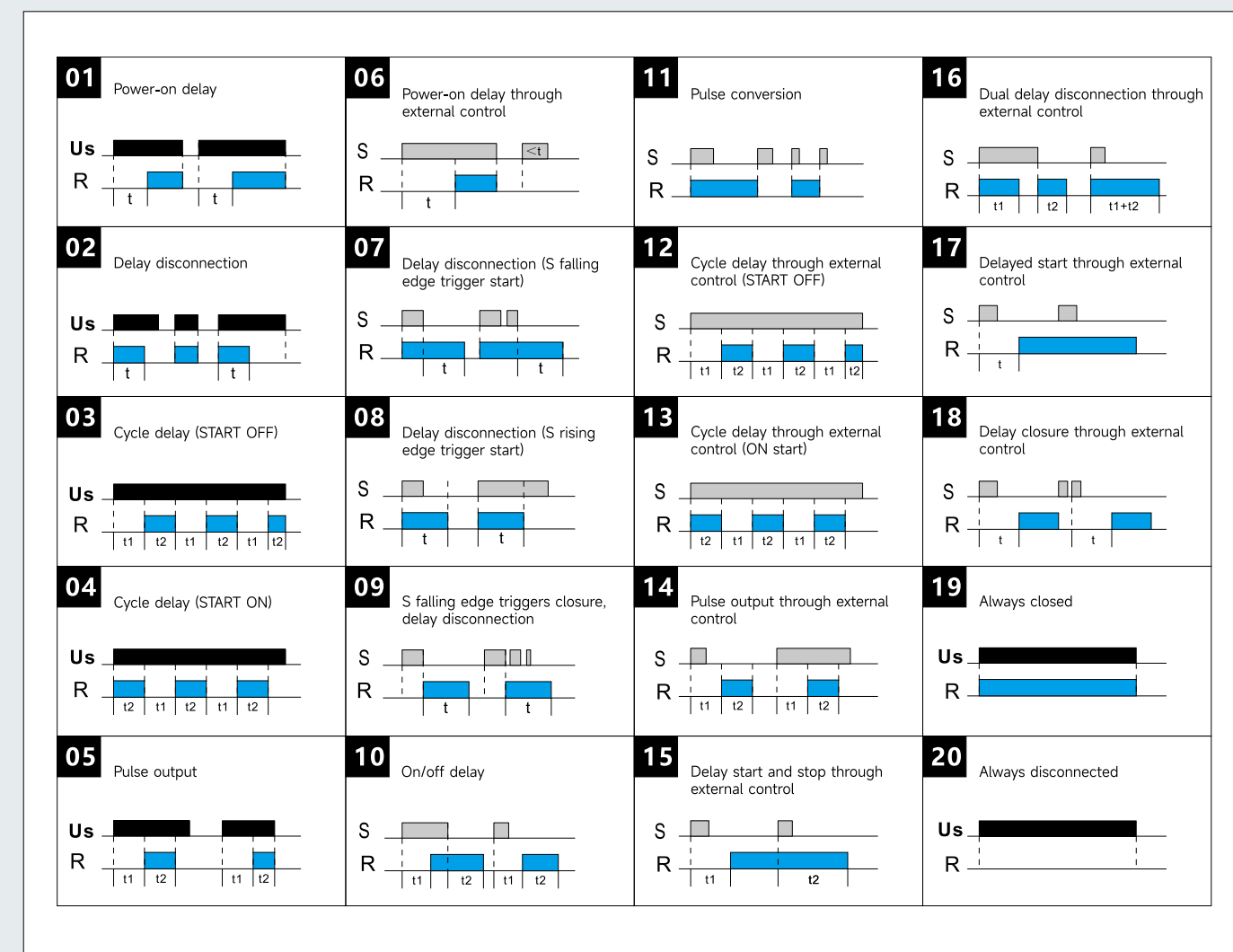


No	Item	Description
①	CDT6 series time relay	-
②	Multifunctional digital display time relay	-
③	Number of output contact groups	1: 1 group conversion; 2: 2 group conversion
④	Rated operating power supply voltage	W240:AC/DC24V-240V A220:AC220V

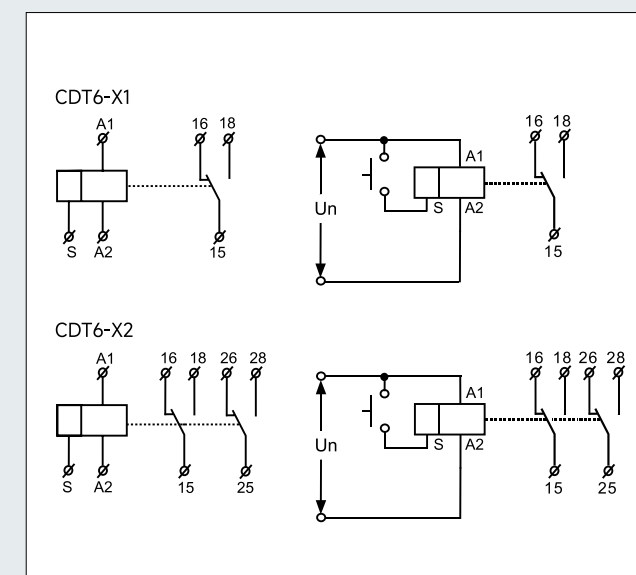
Technical parameters

	CDT6-X1	CDT6-X2
Function	20 functional modes	
Power terminal	A1-A2	
Rated control power supply voltage	AC/DC 24-240V 50Hz	
Power consumption	AC 0.09-3VA/DC 0.05-1.7W	
Rated control power supply voltage	AC 220V 50Hz	
Power consumption	AC max.6VA/1.3W	AC max.6VA/1.9W
Allowable fluctuation range of power supply	-15%;+10%	
Rated impact withstand voltage	2.5kV	
Rated insulation voltage	250V	
Power indicator	Green LED	
Delay range	0.1 seconds - 99 days	
Setting method	Button setting	
Setting accuracy	2%	
Repeatability	0.2%	
Temperature fluctuation error	0.05%/°C ,at=20°C	
Output contact parameters	1 set of conversion contacts	2 sets of conversion contacts
	Ith:16A;AC-15:Ue/Ie:250V/5A	
Minimum switching power	500mW	
Output relay indication	Red LED	
Mechanical life	1×10 <sup>7</sup>	
Electrical life (resistive load)	1×10 <sup>5</sup>	
Reset time	Maximum 200ms	
Operating ambient temperature	-20°C ~+55°C	
Storage and transportation ambient temperature	-35°C ~+75°C	
Installation method	35mm card rail installation	
Protection level	IP20	
Installation location	Arbitrary	
Installation altitude	≤ 2000m	
Installation altitude	2	
Wiring ability	1×2.5mm <sup>2</sup> or 2×1.5mm <sup>2</sup> 0.4N·m	
Dimensions	90mm×18mm×65mm	
Weight	67g	80g
Meet the standard	GB/T 14048.5,IEC60947-5-1,EN 61812-1	

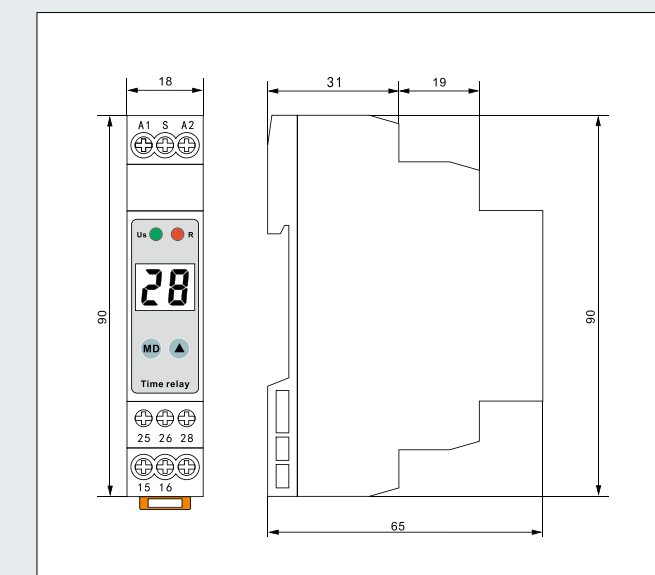
Function diagramw



Wiring diagram



Shape and size (mm)





# CDT6-2T Dual Delay Type Time Relay



# CDT6-2T Dual Delay Type Time Relay



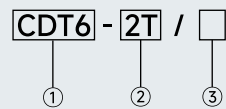
### Application

- The dual delay time relay can set 2 sets of power-on delay time, which can be used for time-sharing input of heavy loads to prevent the peak current of the main loop from being too large.
- 2 time relays can be replaced in specific applications to save costs.

### Features

- 2 sets of power-on delay settings can be set separately.
- Ultra-wide delay range, 0.1 seconds-10 days can be set (10 gears).
- It has AC/DC12V-240V ultra-wide operating voltage specifications to choose from.
- The working status of the relay is indicated by an LED indicator.
- Ultra-small size, only 18mm width, 35mm card rail installation.

### Model Designation



No	Item	Description
①	CDT6 series time relay	-
②	Dual delay type time relay	-
③	Rated operating power supply voltage	A220:AC230V; W240:AC/DC12V-240V;

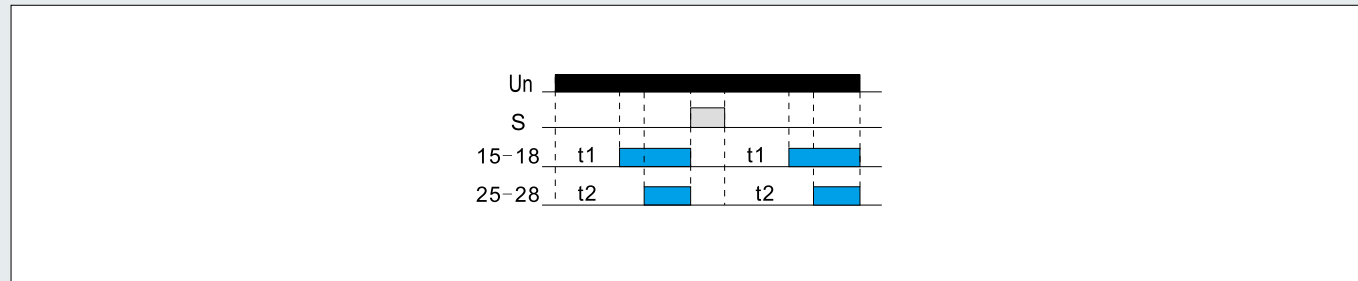
### Technical parameters

CDT6-2T	
Function	Dual-set power-on delay
Power terminal	A1-A2
Rated control power supply voltage	AC/DC 12-240V(50-60Hz)
Power consumption	AC 0.09-3VA/DC 0.05-1.7W
Rated control power supply voltage	AC 0.09-3VA/DC 0.05-1.7W
Power consumption	AC max.6VA/1.9W
Allowable fluctuation range of power supply	-15%;+10%
Power indicator	Green LED
Delay range	0.1 seconds-10 days, normally open, normally closed
Setting method	knob
Setting accuracy	10%
Repeatability	0.2%
Temperature fluctuation error	0.05%/°C ,at=20°C (0.05%° F, at=68° F)
Output contact parameters	2 sets of conversion contacts
	16A/AC1
	250VAC/24VDC
Minimum switching power	500mW
Output relay indication	Red LED
Mechanical life	1×10 <sup>7</sup>
Electrical life (resistive load)	1×10 <sup>5</sup>
Reset time	Maximum 200ms
Operating ambient temperature	-20°C ~+55°C
Storage and transportation ambient temperature	-35°C ~+75°C
Installation method	35 mm card rail installation
Protection level	IP20
Installation location	Arbitrary
Installation altitude	≤ 2000m
Pollution level	2
Wiring ability	1×2.5mm <sup>2</sup> or 2×1.5mm <sup>2</sup> 0.4N·m
Dimensions	90mm×18mm×65mm
Weight	80g
Meet the standard	GB/T 14048.5,IEC60947-5-1,EN 61812-1

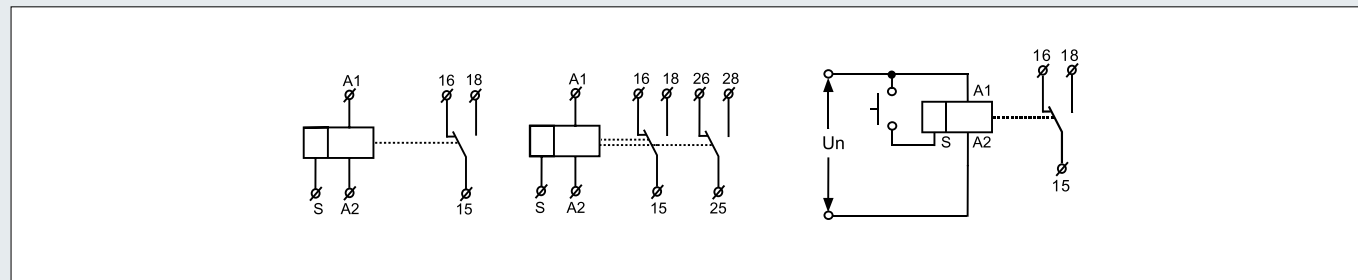
# CDT6-2T Dual Delay Type Time Relay



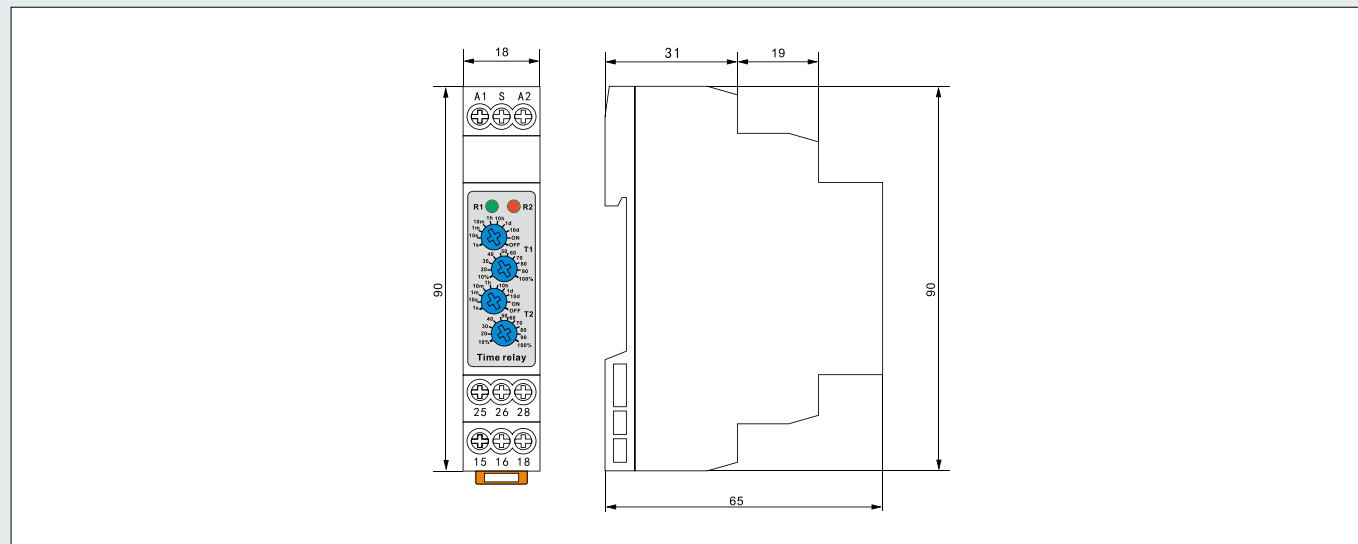
### Function diagram



### Wiring diagram



### Shape and size (mm)



# CDT6-S Cycle Delay Type Time Relay



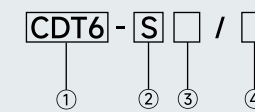
### Application

- It is used for cycle delay control, periodic power-on, lighting control, and heating control of an electrical circuit.

### Features

- There are separate delay settings for ON and OFF, and different delay times can be set.
- Ultra-wide delay range, 0.1 seconds-100 days can be set (10 gears).
- Different working modes can be switched by shorting S-A1.
- It has AC/DC 12V-240V ultra-wide operating voltage specifications to choose from.
- The working status of the relay is indicated by an LED indicator.
- Ultra-small size, only 18mm width, 35mm card rail installation.

### Product selection



No	Item	Description
①	CDT6 series time relay	-
②	Cycle delay type time relay	-
③	Number of output contact groups	1: 1 group conversion 2: 2 groups of conversion
④	Rated operating power supply voltage	A220:AC230V; W240:AC/DC12V-240V;

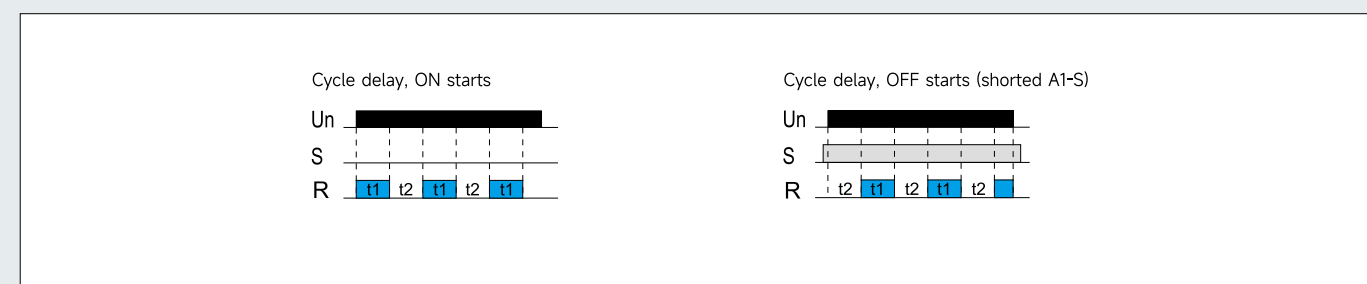




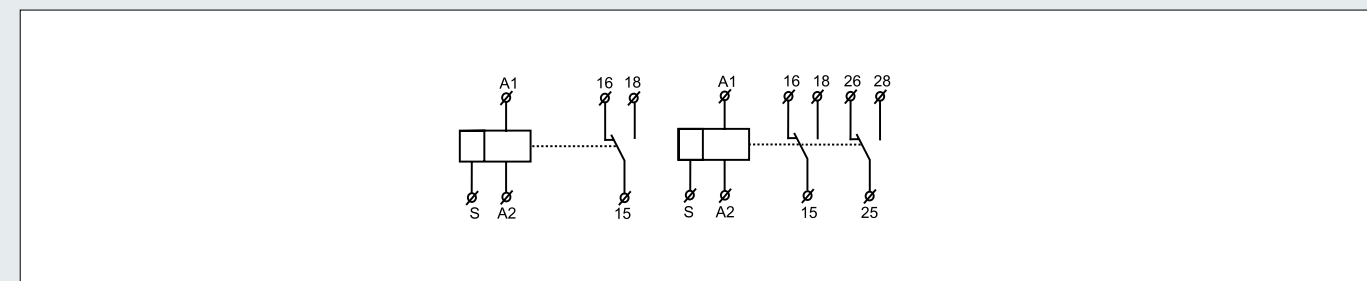
Technical parameters

	CDT6-S1	CDT6-S2
Function	Cycle delay	
Power terminal	A1-A2	
Rated control power supply voltage	AC/DC 12-240V(50-60Hz)	
Power consumption	AC 0.09-3VA/DC 0.05-1.7W	
Rated control power supply voltage	AC 220V(50-60Hz)	
Power consumption	AC max.6VA/1.3W	AC max.6VA/1.9W
Allowable fluctuation range of power supply	-15%;+10%	
Power indicator	Green LED	
Delay range	0.1 seconds - 100 days	
Setting method	knob	
Setting accuracy	10%	
Repeatability	0.2%	
Temperature fluctuation error	0.05%/°C ,at=20°C (0.05%° F, at=68° F)	
Output contact parameters	1 set of conversion contacts	2 sets of conversion contacts
	1×16A(AC1)	2×16A(AC1)
	250VAC/24VDC	
Minimum switching power	500mW	
Output relay indication	Red LED	
Mechanical life	1×10 <sup>7</sup>	
Electrical life (resistive load)	1×10 <sup>5</sup>	
Reset time	Maximum 200ms	
Operating ambient temperature	-20°C ~+55°C	
Storage and transportation ambient temperature	-35°C ~+75°C	
Installation method	35mm card rail installation	
Protection level	IP20	
Installation location	Arbitrary	
Installation altitude	≤ 2000m	
Pollution level	2	
Wiring ability	1×2.5mm <sup>2</sup> or 2×1.5mm <sup>2</sup> 0.4N·m	
Dimensions	90mm×18mm×65mm	
Weight	67g	80g
Meet the standard	GB/T 14048.5,IEC60947-5-1,EN 61812-1	

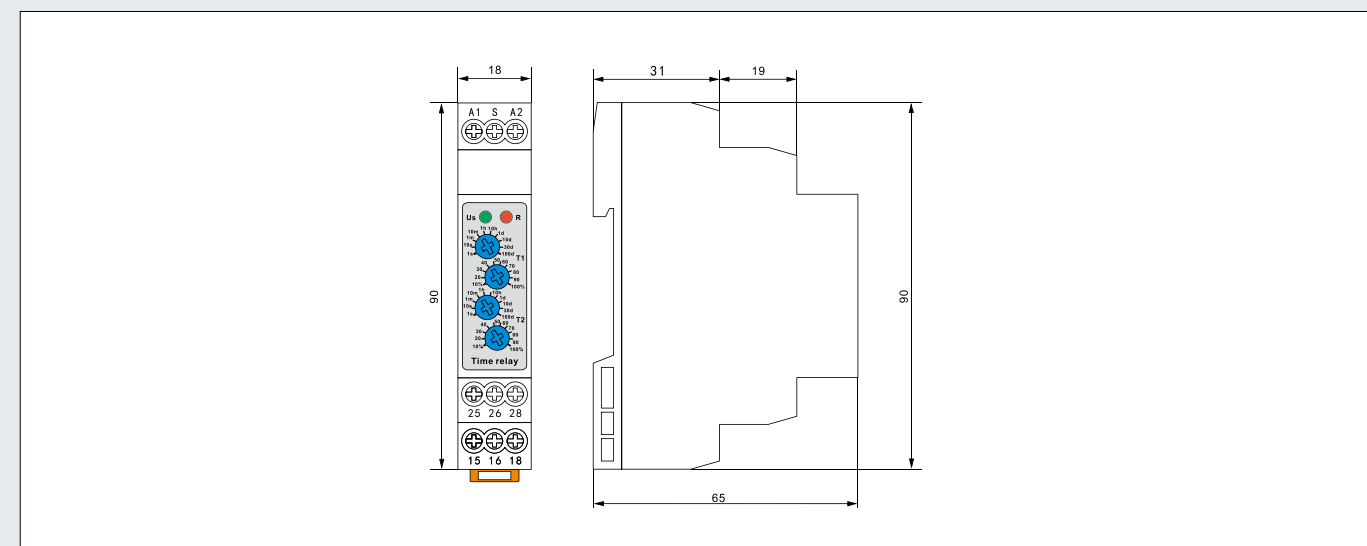
Function diagramw



Wiring diagram



Shape and size (mm)





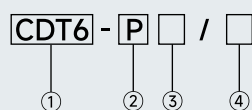
**Application**

- It is used to delay and generate a pulse, which is used to delay a certain load for a period of time.

**Features**

- Separate delay time and pulse width settings, different delay times can be set.
- Ultra-wide delay range, 0.1 seconds-100 days can be set (10 gears).
- The delay time can be reset by shorting S-A1.
- It has AC/DC 12V-240V ultra-wide operating voltage specifications to choose from.
- The working status of the relay is indicated by an LED indicator.
- Ultra-small size, only 18mm width, 35mm card rail installation.

**Model Designation**



No	Item	Description
①	CDT6 series time relay	-
②	Delay pulse type time relay	-
③	Number of output contact groups	1: 1 group conversion; 2: 2 group conversion;
④	Rated operating power supply voltage	A220:AC230V; W240:AC/DC12V-240V;

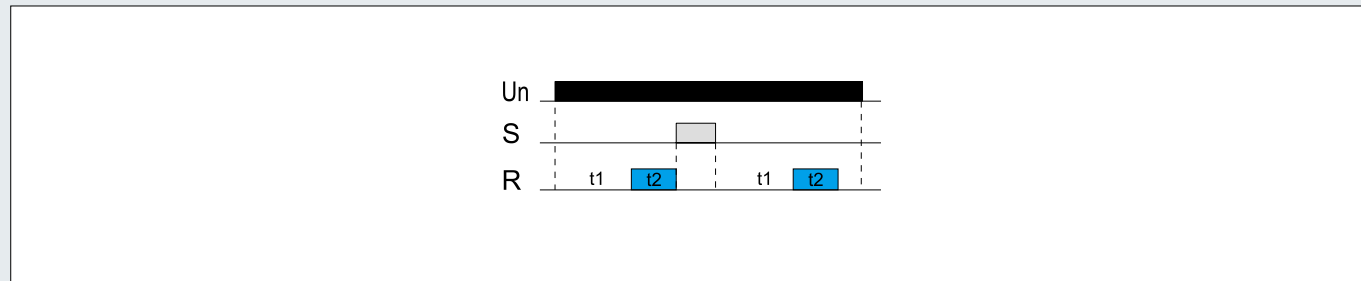
**Technical parameters**

	CDT6-P1	CDT6-P2
Function	Delay pulse output	
Power terminal	A1-A2	
Rated control power supply voltage	AC/DC 12-240V(50-60Hz)	
Power consumption	AC 0.09-3VA/DC 0.05-1.7W	
Rated control power supply voltage	AC 220V(50-60Hz)	
Power consumption	AC max.6VA/1.3W	AC max.6VA/1.9W
Allowable fluctuation range of power supply	-15%;+10%	
Power indicator	Green LED	
Delay range	0.1 seconds - 100 days	
Setting method	knob	
Setting accuracy	10%	
Repeatability	0.2%	
Temperature fluctuation error	0.05%/°C ,at=20°C (0.05%° F, at=68° F)	
Output contact parameters	1 set of conversion contacts	2 sets of conversion contacts
	1×16A(AC1)	2×16A(AC1)
	250VAC/24VDC	
Minimum switching power	500mW	
Output relay indication	Red LED	
Mechanical life	1×10 <sup>7</sup>	
Electrical life (resistive load)	1×10 <sup>5</sup>	
Reset time	Maximum 200ms	
Operating ambient temperature	-20°C ~+55°C	
Storage and transportation ambient temperature	-35°C ~+75°C	
Installation method	35 mm card rail installation	
Protection level	IP20	
Installation location	Arbitrary	
Installation altitude	≤ 2000m	
Pollution level	2	
Wiring ability	1×2.5mm <sup>2</sup> or 2×1.5mm <sup>2</sup> 0.4N·m	
Dimensions	90mm×18mm×65mm	
Weight	67g	80g
Meet the standard	GB/T 14048.5,IEC60947-5-1,EN 61812-1	

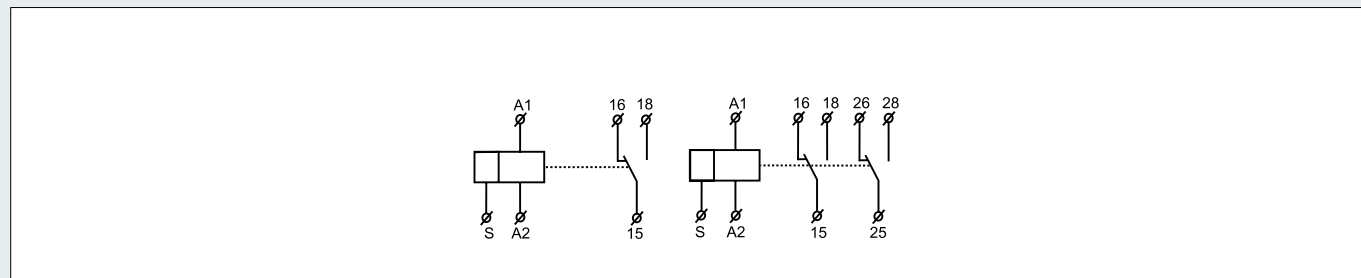




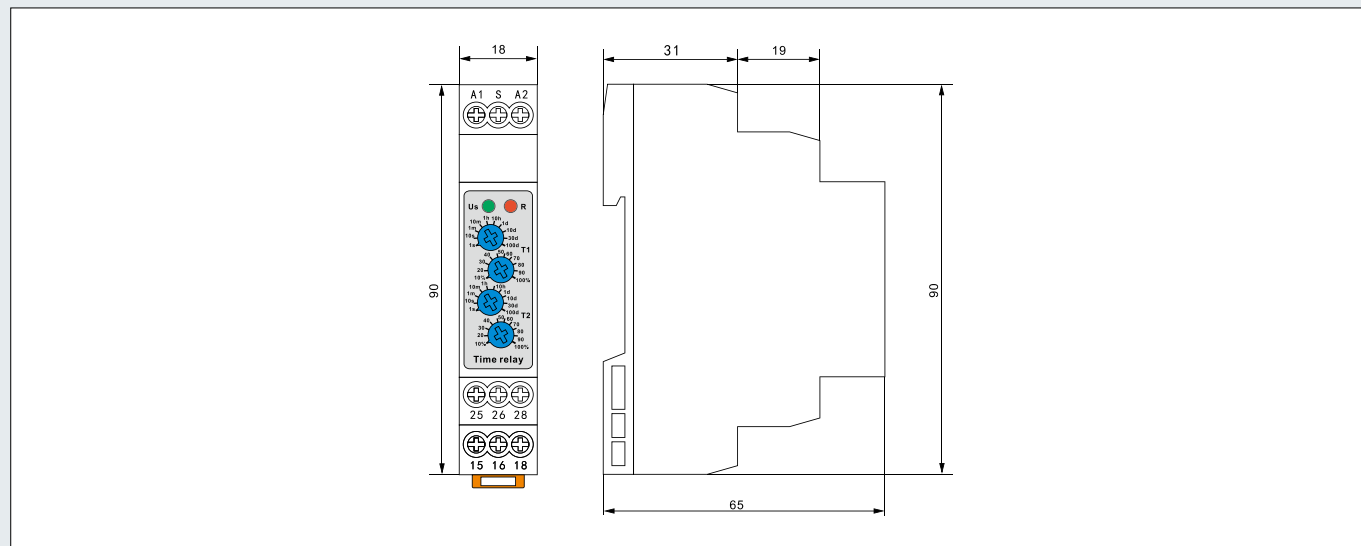
Function diagram



Wiring diagram



Shape and size (mm)



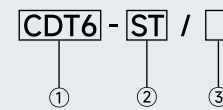
Application

- It is specially used for motor star triangle start-up control, which can greatly simplify the electrical circuit, facilitate wiring and reduce costs.

Features

- t1: The start-up delay range of 0.1s-10min can be set (knob setting).
- t2: The conversion time is 0.1s-1s can be set (knob setting).
- With AC220, AC380, AC/DC12V-240V ultra-wide operating voltage specifications are optional.
- The working status of the relay is indicated by an LED indicator.
- Ultra-small size, only 18mm width, 35mm card rail installation.

Product selection

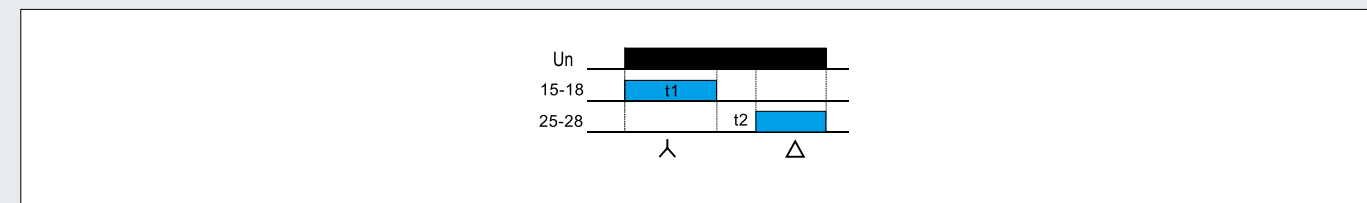


No	Item	Description
①	CDT6 series time relay	-
②	Star Triangle start time relay	-
③	Rated operating power supply voltage	A220:AC230V; A380:AC380V; W240:AC/DC12V-240V;

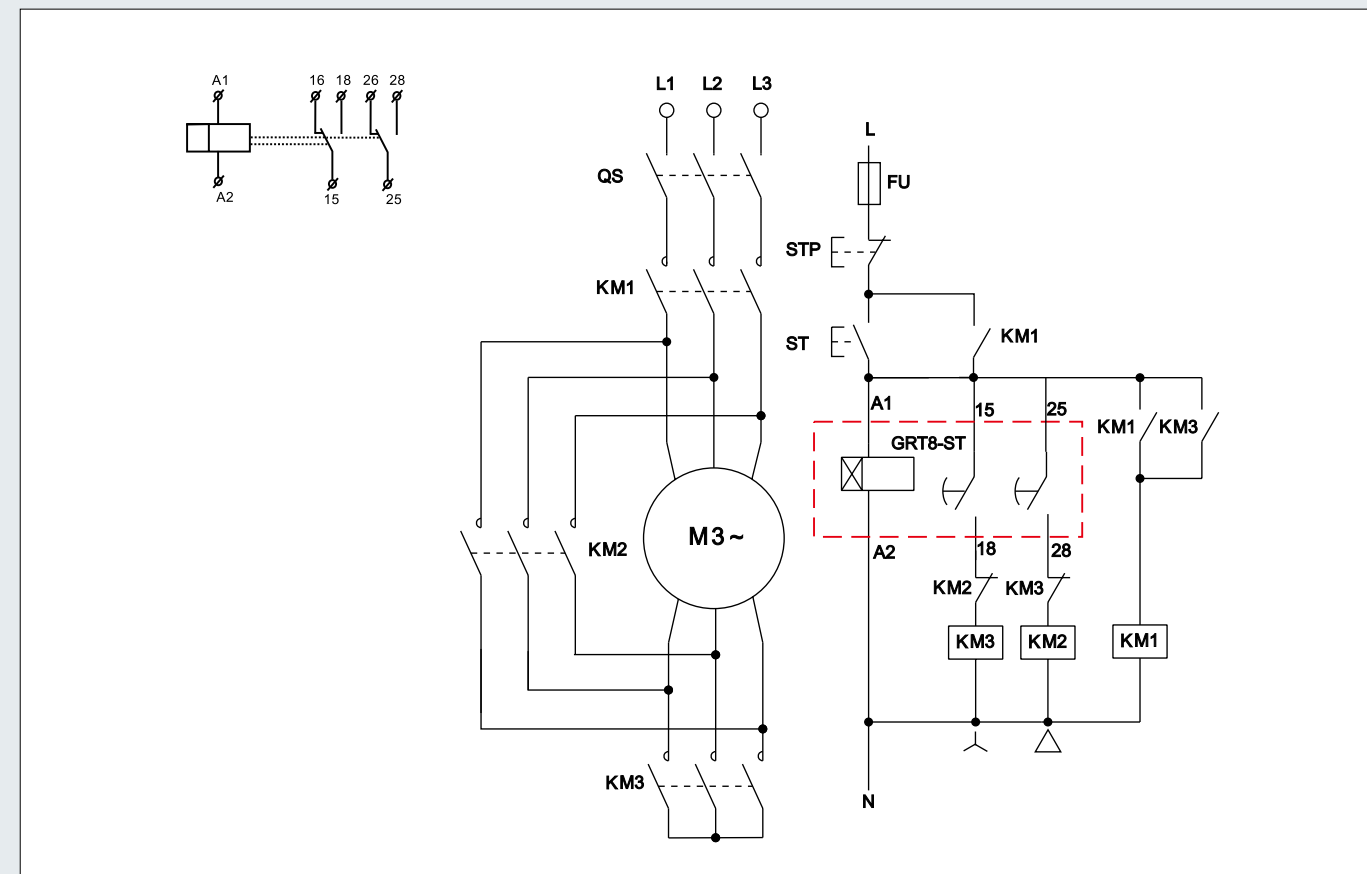
Technical parameters

	CDT6-ST
Function	Star Triangle start delay
Power terminal	A1-A2
Rated control power supply voltage	AC/DC 12-240V(50-60Hz)
Power consumption	AC 0.3-2VA/DC 0.1-1.2W
Rated control power supply voltage	AC 220V, AC 380V(50-60Hz)
Power consumption	AC max.6VA/1.3W
Allowable fluctuation range of power supply	-15%+10%
Power indicator	Green LED
Delay range	Start-up delay: 0.1 seconds-10 minutes, conversion delay: 0.1s-1s
Setting method	knob
Setting accuracy	10%
Repeatability	0.2%
Temperature fluctuation error	0.05%/°C ,at=20°C (0.05%° F, at=68° F)
Output contact parameters	2 sets of conversion contacts
	16A/AC1 250VAC/24VDC
Minimum switching power	500mW
Output relay indication	Red LED
Mechanical life	1×10 <sup>7</sup>
Electrical life (resistive load)	1×10 <sup>5</sup>
Reset time	Maximum 200ms
Operating ambient temperature	-20°C ~+55°C
Storage and transportation ambient temperature	-35°C ~+75°C
Installation method	35mm card rail installation
Protection level	IP20
Installation location	Arbitrary
Installation altitude	≤ 2000m
Pollution level	2
Wiring ability	1×2.5mm <sup>2</sup> or 2×1.5mm <sup>2</sup> 0.4N·m
Dimensions	90mm×18mm×65mm
Weight	80g
Meet the standard	GB/T 14048.5, IEC60947-5-1, EN 61812-1

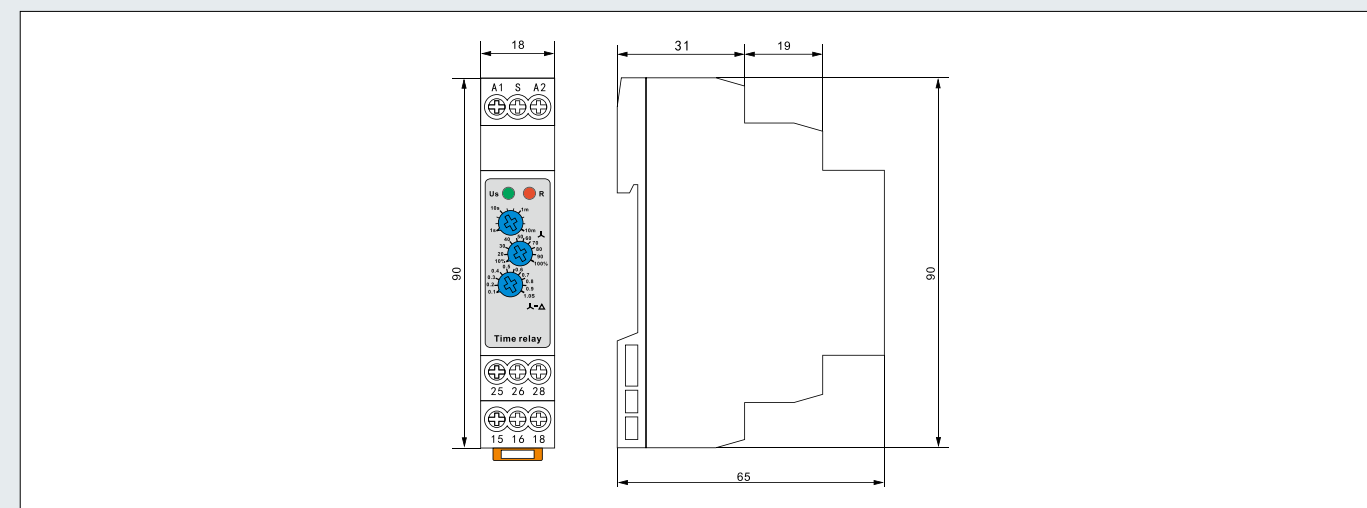
Function diagramw



Wiring diagram



Shape and size (mm)





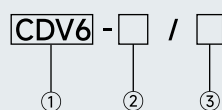
**Application**

- It is used for overvoltage protection of electrical equipment or compressors.
- Switching control of emergency/backup power supply.

**Features**

- Monitor its own operating voltage (true RMS measurement)
- The working mode can be selected through the knob.
- The voltage measurement accuracy is  $\leq 1\%$ .
- The working status of the relay is indicated by an LED indicator.
- Ultra-small size, only 18mm width, 35mm card rail installation.

**Model Designation**



No	Item	Description																				
①	CDV6 series voltage monitoring relay	-																				
②	Delay pulse type time relay	01: Overvoltage/undervoltage is selected by knob 02: It has both overvoltage and undervoltage functions																				
③	Rated supply voltage	<table border="1"> <thead> <tr> <th>Code name</th> <th>Rated supply voltage</th> <th>Limit operating voltage</th> <th>Set voltage range</th> </tr> </thead> <tbody> <tr> <td>D12</td> <td>DC 12V</td> <td>DC 7...20V</td> <td>DC 9...15V</td> </tr> <tr> <td>AD48</td> <td>AC/DC 24...48V</td> <td>AC/DC 15...270V</td> <td>AC/DC 20...80V</td> </tr> <tr> <td>AD240</td> <td>AC/DC 110...240V</td> <td>AC/DC 50...270V</td> <td>AC/DC 65...260V</td> </tr> <tr> <td>A220</td> <td>AC 220V</td> <td>AC 160...270V</td> <td>AC 180...260V</td> </tr> </tbody> </table>	Code name	Rated supply voltage	Limit operating voltage	Set voltage range	D12	DC 12V	DC 7...20V	DC 9...15V	AD48	AC/DC 24...48V	AC/DC 15...270V	AC/DC 20...80V	AD240	AC/DC 110...240V	AC/DC 50...270V	AC/DC 65...260V	A220	AC 220V	AC 160...270V	AC 180...260V
Code name	Rated supply voltage	Limit operating voltage	Set voltage range																			
D12	DC 12V	DC 7...20V	DC 9...15V																			
AD48	AC/DC 24...48V	AC/DC 15...270V	AC/DC 20...80V																			
AD240	AC/DC 110...240V	AC/DC 50...270V	AC/DC 65...260V																			
A220	AC 220V	AC 160...270V	AC 180...260V																			

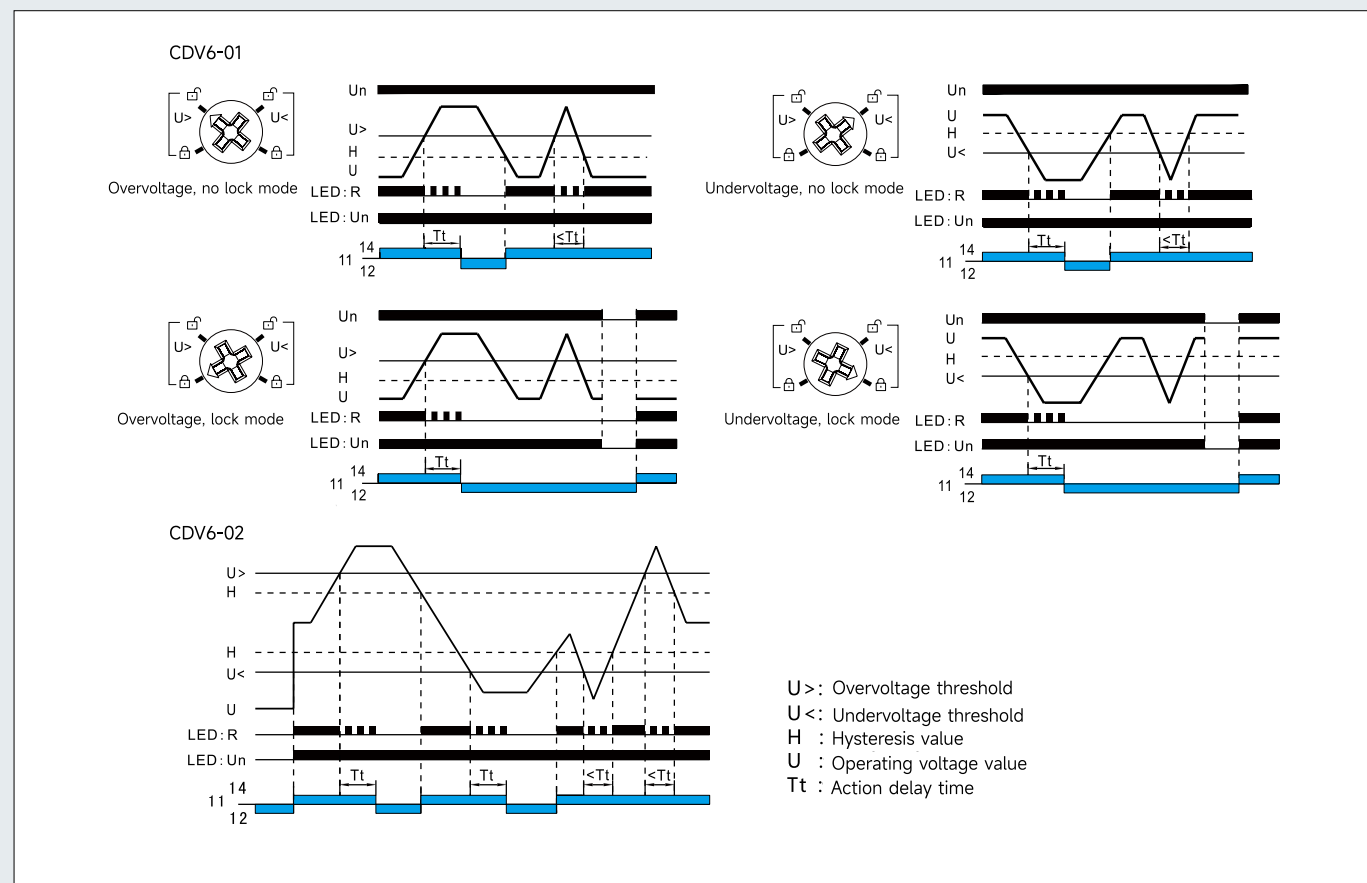
**Technical parameters**

	CDV6-01	CDV6-02
Function	Voltage monitoring	
Power terminal (monitoring terminal)	A1(+)-A2(-)	
Rated supply voltage	DC12V,AC/DC24V-48V,AC/DC110V-240V,AC220V	
Rated power frequency	45Hz-65Hz,0	
Rated insulation voltage	460V	
Hysteresis value	5%-20%	3% fixed
Power indicator	Green LED	
Action delay time	0.1s-10s,10%	
Voltage measurement error	$\leq 1\%$	
Power-on delay time	0.5s	
Knob setting accuracy	10%	
Reset time	1s	
Temperature fluctuation error	0.05%/°C ,at=20°C	
Output	1×SPDT	
	10A/AC1	
	250VAC/24VDC	
Minimum switching power	500mW	
Output relay indication	Red LED	
Mechanical life	$1 \times 10^7$	
Electrical life (resistive load)	$1 \times 10^5$	
Operating ambient temperature	-20°C ~+55°C	
Storage and transportation ambient temperature	-35°C ~+75°C	
Installation method	35mm card rail installation	
Protection level	IP20	
Installation location	Arbitrary	
Installation altitude	$\leq 2000\text{m}$	
Pollution level	2	
Wiring ability	$1 \times 2.5\text{mm}^2$ or $2 \times 1.5\text{mm}^2$ 0.8N·m	
Dimensions	90mm×18mm×65mm	
Weight	67g	
Meet the standard	GB/T 14048.5,IEC60947-5-1,EN 60255-1	

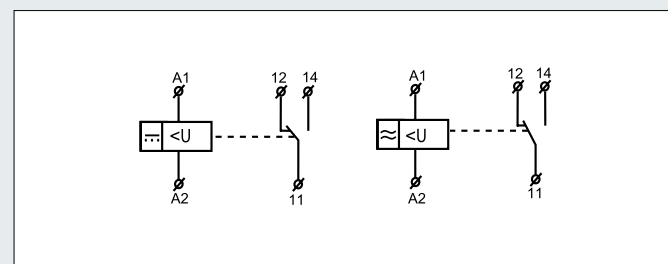




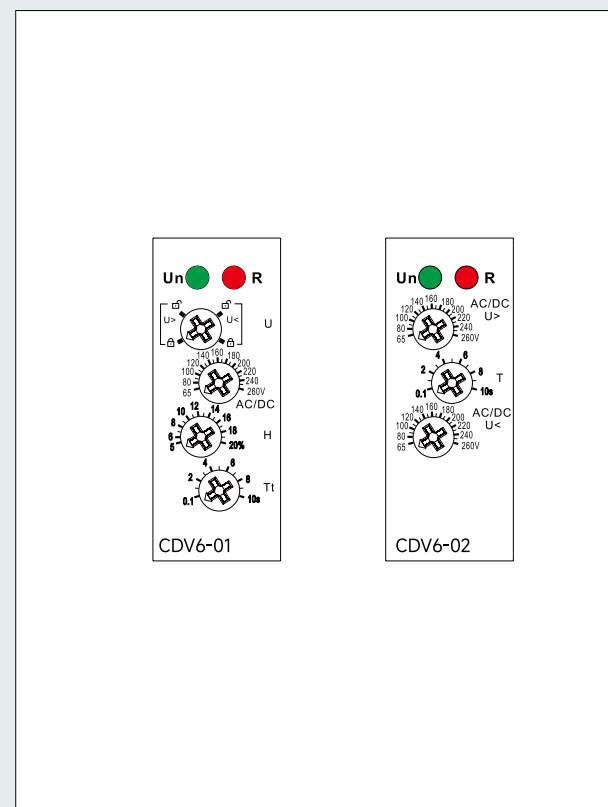
Function diagramw



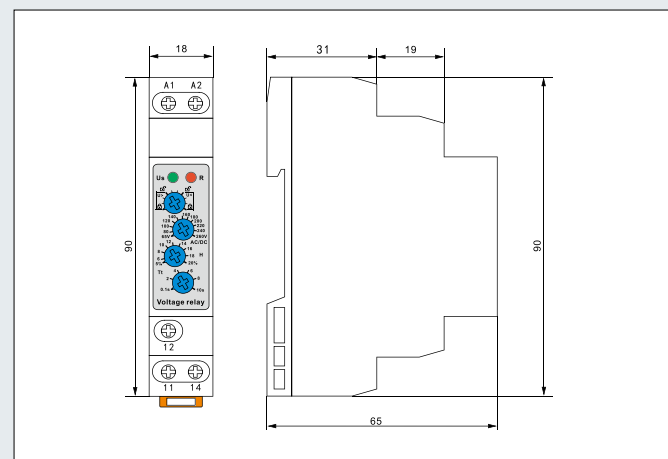
Wiring diagram



Panel diagram



Shape and size (mm)



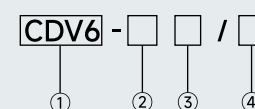
Application

- Used for equipment protection and control (tower cranes, air conditioners, elevators, agricultural equipment, refrigerated trucks).
- Protect the equipment to prevent accidents caused by reverse operation.
- Normal/emergency power switch.
- Prevent phase disconnection of the power load.

Features

- Monitor its own operating voltage (true RMS measurement), 45Hz~65Hz wide frequency measurement.
- 8 kinds of rated voltages are adjustable, suitable for voltages in various regions of the world.
- 3-phase 3-wire and 3-phase 4-wire specifications are optional.
- The voltage measurement accuracy is  $\leq 1\%$ .
- It has an anti-harmonic model, which is optimized for high anti-interference occasions.
- The working status of the relay is indicated by an LED indicator.
- Ultra-small size, only 18mm width, 35mm card rail installation.

Product selection



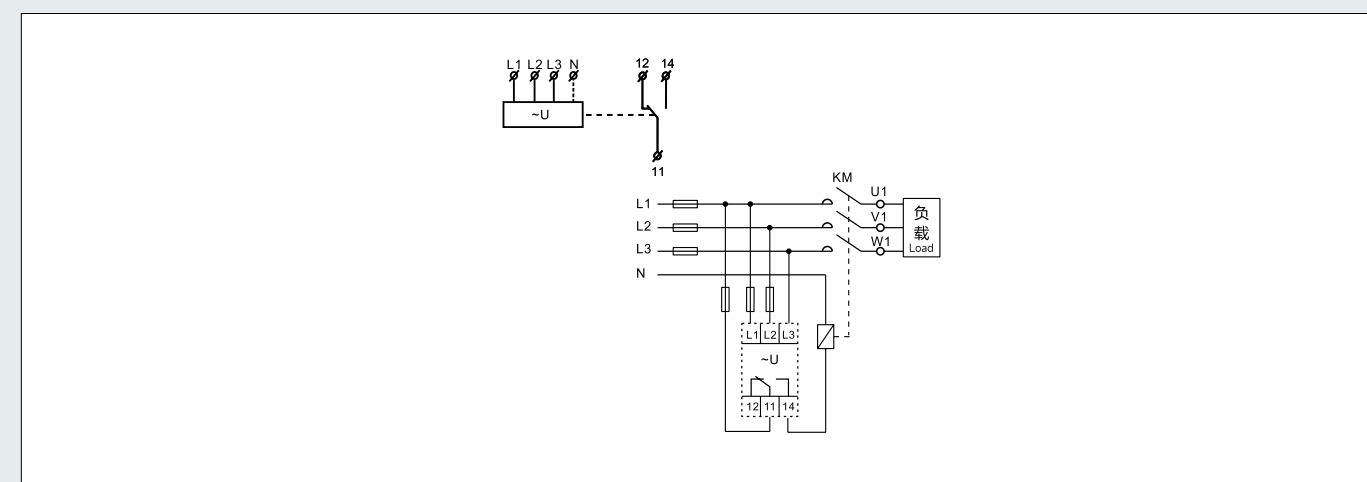
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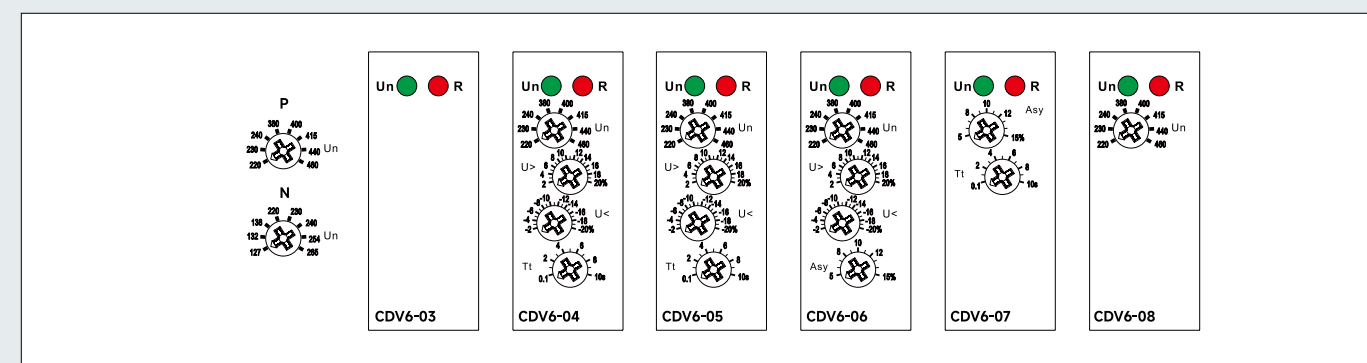
Technical parameters

	P	N
Function	Monitor L-L voltage (3-phase 3-wire system)	Monitor L-N voltage (3-phase 4-wire system)
Monitoring terminal	L1-L2-L3	L1-L2-L3-N
Power supply	L1-L2	L1-N
Rated operating voltage selection	220-230-240-380-400 -415-440-460(P-P)	127-132-138-220-230 -240-254-265(P-N)
Measuring frequency range	45Hz-65Hz	
Measuring range	176V-552V	101V-318V
Voltage threshold range	2%-20% (rated voltage)	
Unbalanced value threshold range	5%-15%	
Voltage fixed hysteresis rate	2%	
Power indicator	Green LED	
Action delay time	0.1s - 10s(Adjustable)	
Voltage measurement error	≤ 1%	
Power-on delay time	0.5s	
Knob setting accuracy	10%	
Reset time	1s	
Temperature fluctuation error	0.05%/°C ,at=20°C	
Output	1×SPDT	
	10A/AC1	
	250VAC/24VDC	
Minimum switching power	500mW	
Output relay indication	Red LED	
Mechanical life	1×10 <sup>7</sup>	
Electrical life (resistive load)	1×10 <sup>5</sup>	
Operating ambient temperature	-20°C ~+55°C	
Storage and transportation ambient temperature	-35°C ~+75°C	
Installation method	35mm card rail installation	
Protection level	IP20	
Installation location	Arbitrary	
Installation altitude	≤ 2000m	
Pollution level	2	
Wiring ability	1×2.5mm <sup>2</sup> or 2×1.5mm <sup>2</sup> 0.8N·m	
Dimensions	90mm×18mm×65mm	
Weight	67g	
Meet the standard	GB/T 14048.5,IEC60947-5-1,EN 60255-1	

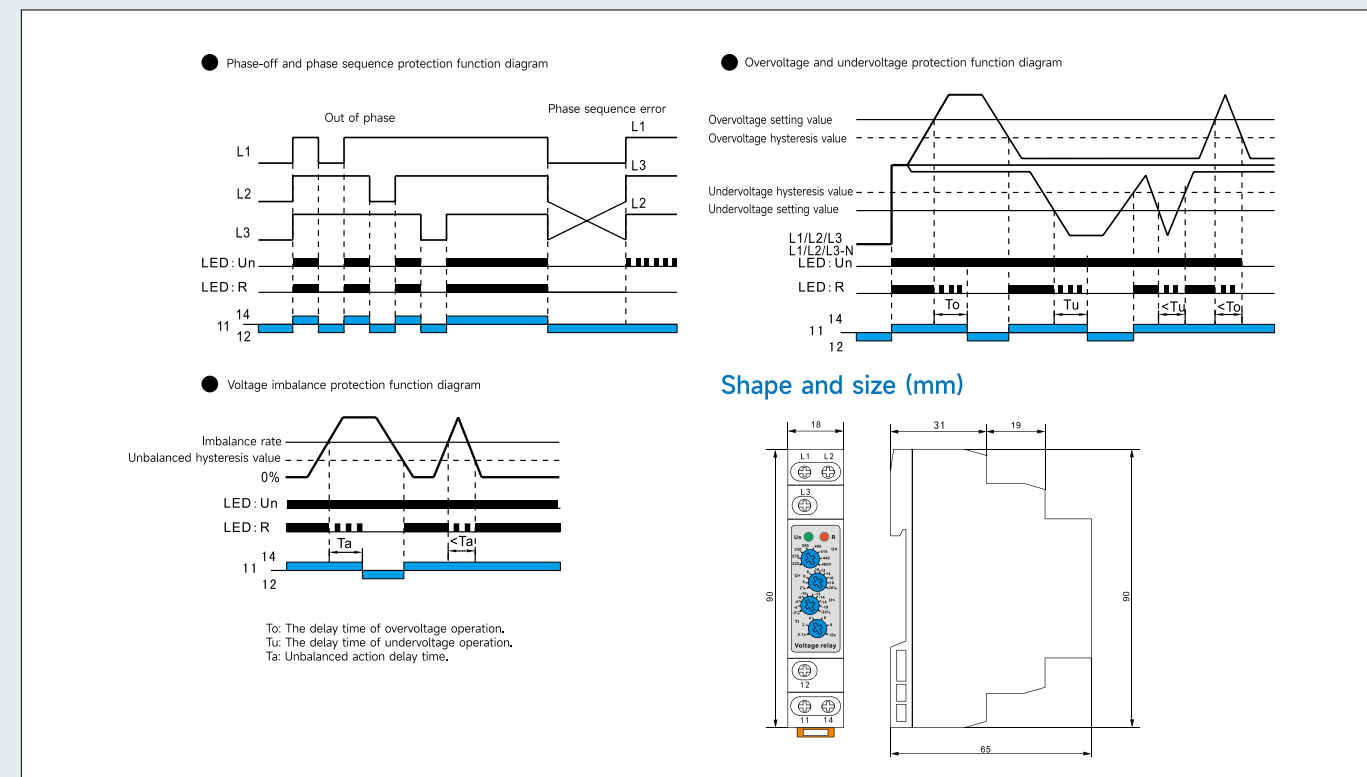
Wiring diagram



Panel diagram



Function diagramw





**Application**

- Used for equipment protection and control (tower cranes, air conditioners, elevators, agricultural equipment, refrigerated trucks).
- Protect the equipment to prevent accidents caused by reverse operation.
- Normal/emergency power switch.
- Prevent phase disconnection of the power load.

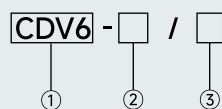
**Features**

- Monitor its own operating voltage (true RMS measurement), 45Hz ~ 65Hz wide frequency measurement.
- Two sets of output contacts are used for protection and fault alarm.
- 8 kinds of rated voltages are adjustable, suitable for voltages in various regions of the world.
- 3-phase 3-wire and 3-phase 4-wire specifications are optional.
- The voltage measurement accuracy is  $\leq 1\%$ .
- Anti-harmonic design, optimized for high anti-interference occasions.
- The working status of the relay is indicated by an LED indicator.
- Ultra-small size, only 18mm width, 35mm card rail installation.

**Technical parameters**

	P	N
Function	Monitor L-L voltage (3-phase 3-wire system)	Monitor L-N voltage (3-phase 4-wire system)
Monitoring terminal	L1-L2-L3	L1-L2-L3-N
Power supply	L1-L2	L1-N
Rated operating voltage selection	220-230-240-380-400 -415-440-460(P-P)	127-132-138-220-230 -240-254-265(P-N)
Measuring frequency range	45Hz-65Hz	
Measuring range	176V-552V	101V-318V
Voltage threshold range	2%-20% (rated voltage)	
Unbalanced value threshold range	5%-15%	
Voltage fixed hysteresis rate	2%	
Power indicator	Green LED	
Action delay time	0.1s - 10s(Adjustable)	
Voltage measurement error	$\leq 1\%$	
Power-on delay time	0.5s	
Knob setting accuracy	10%	
Reset time	1s	
Temperature fluctuation error	0.05%/°C ,at=20°C	
Output	2×SPDT	
	8A/AC1	
	250VAC/24VDC	
Minimum switching power	500mW	
Output relay indication	Red LED	
Mechanical life	$1 \times 10^7$	
Electrical life (resistive load)	$1 \times 10^5$	
Operating ambient temperature	-20°C ~+55°C	
Storage and transportation ambient temperature	-35°C ~+75°C	
Installation method	35mm card rail installation	
Protection level	IP20	
Installation location	Arbitrary	
Installation altitude	$\leq 2000\text{m}$	
Pollution level	2	
Wiring ability	$1 \times 2.5\text{mm}^2$ or $2 \times 1.5\text{mm}^2$ 0.8N·m	
Dimensions	90mm×18mm×65mm	
Weight	67g	
Meet the standard	GB/T 14048.5,IEC60947-5-1,EN 60255-1	

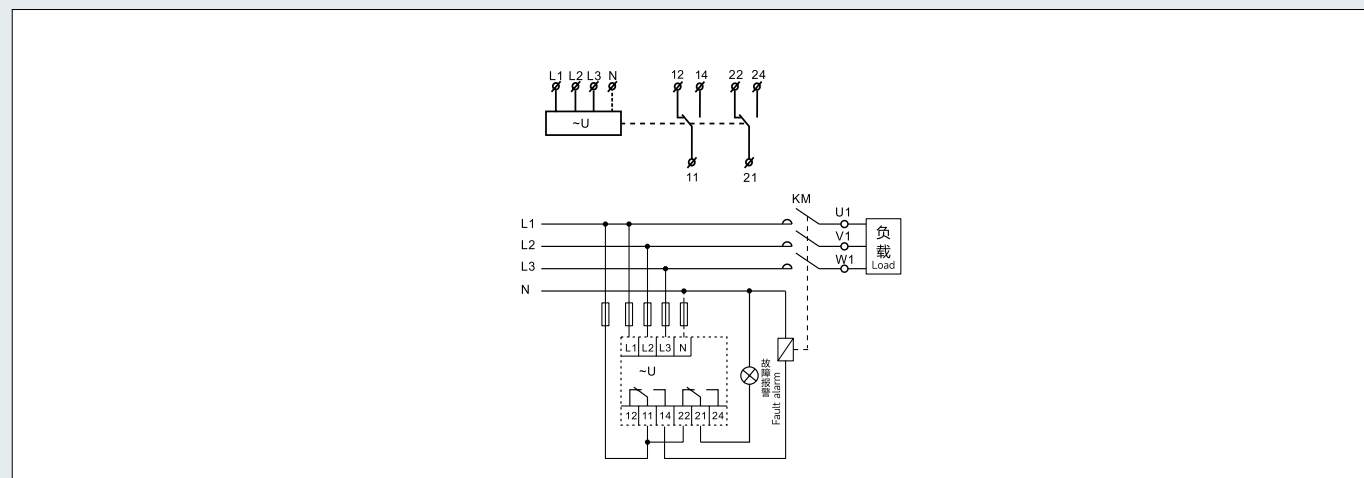
**Model Designation**



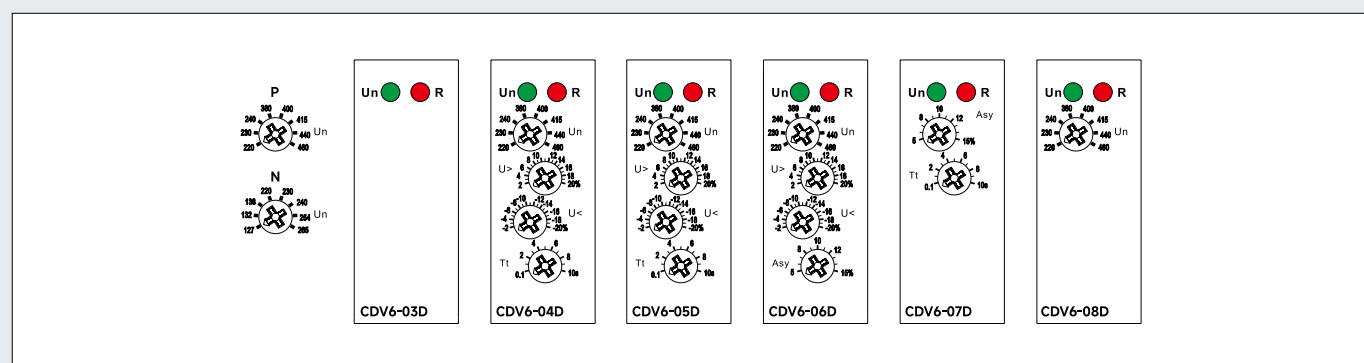
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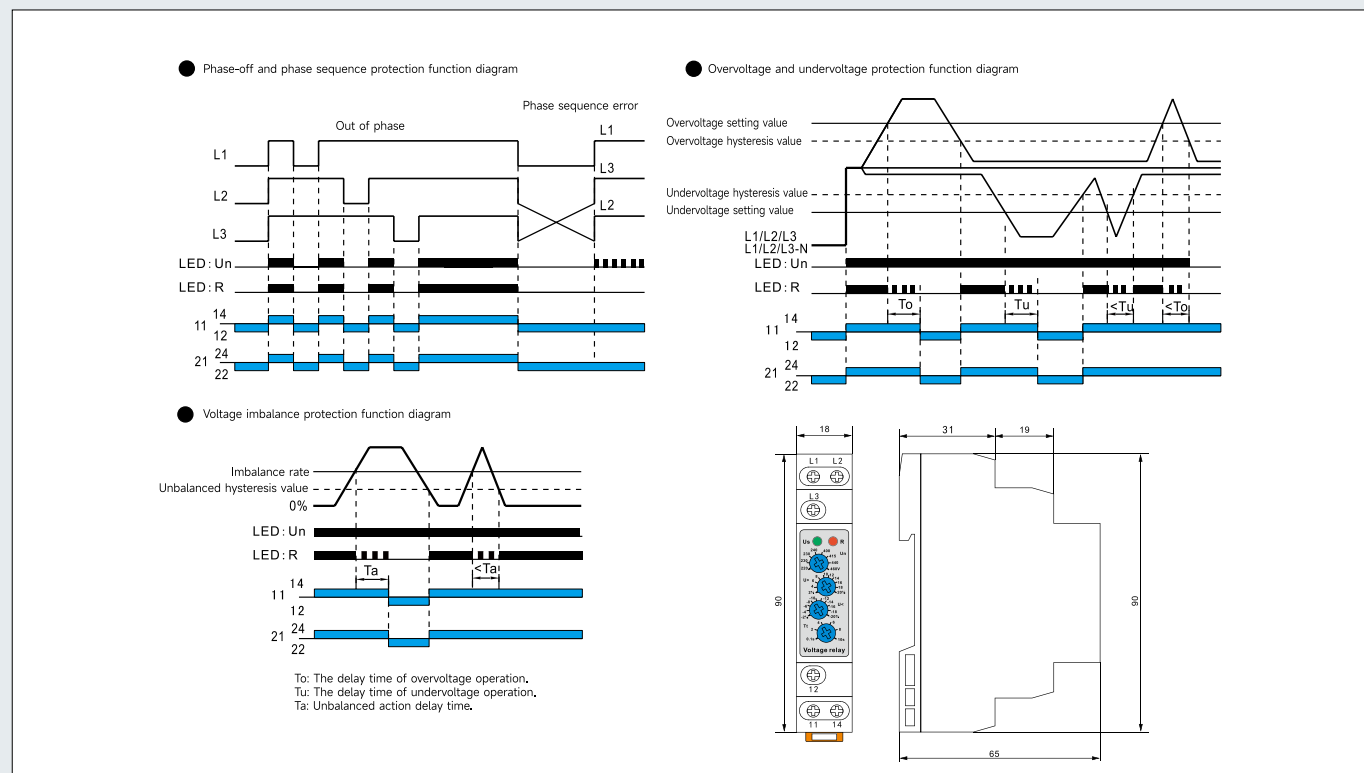
Wiring diagram



Panel diagram



Function diagram



Application

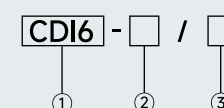
- Elevator overload monitoring, light load monitoring.
- Single-phase motor monitoring current monitoring.
- Current overload/under load indication and protection.

Features

- The action delay time is adjustable from 0.1s to 10s to avoid peak current.
- The power-up delay time is adjustable from 0.1s to 10s to avoid the start-up current of the motor load.
- 6-speed current specifications are optional.
- Built-in isolated current transformer, and at the same time, an external current transformer can be connected to expand the monitoring current range.
- The working power supply voltage is AC 85-240V.
- The working status of the relay is indicated by an LED indicator.
- Ultra-small size, only 18mm width, 35mm card rail installation.



Product selection

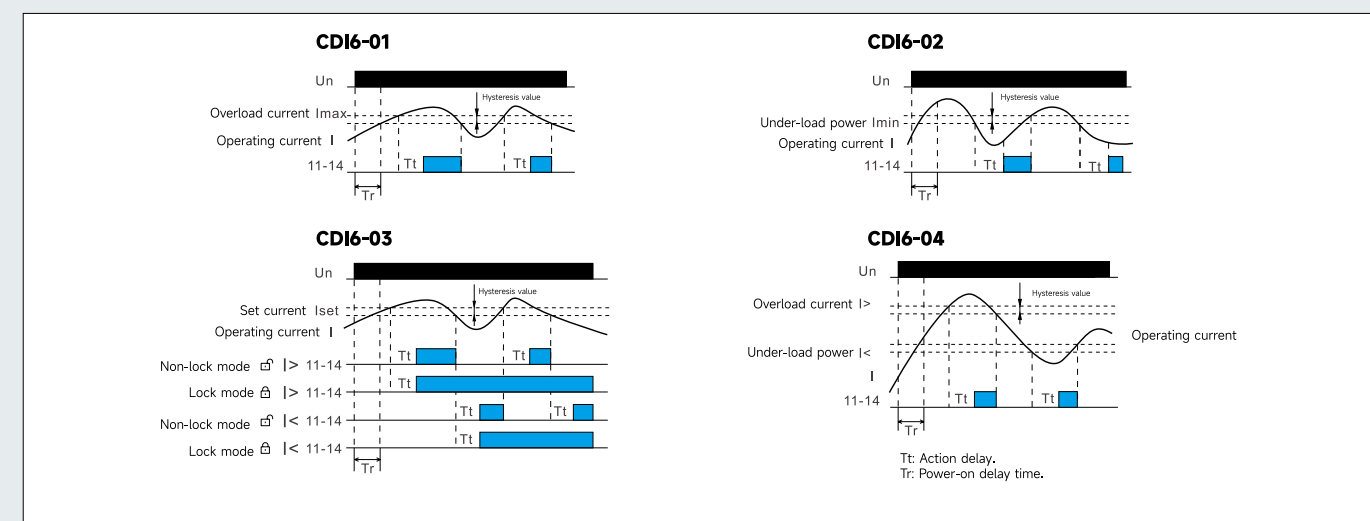


No	Item	Description
①	CDI6 series current monitoring relay	-
②	Function code	Overcurrent protection Under-current protection Overcurrent or overcurrent optional Overcurrent window protection
③	Monitor current range	0.5: 0.05A-0.5A 1: 0.1A-1A 2: 0.2A-2A 5: 0.5A-5A 8: 0.8A-8A 16: 1.6A-16A

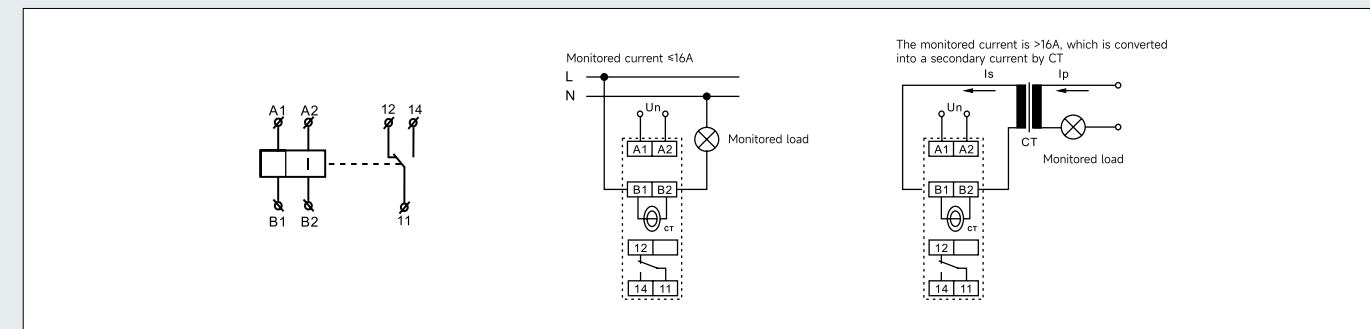
Technical parameters

	CDI6-01	CDI6-02	CDI6-03	CDI6-04		
Function	Overcurrent protection	Under-current protection	Over/under current protection	Overcurrent protection		
Power terminal	A1-A2					
Rated supply voltage	AC85-240V					
Rated power frequency	50/60Hz,0					
Power consumption	max 25VA					
Allowable fluctuation range of power supply	-15%;+10%					
Current setting range	0.05A-0.5A	0.1A-1A	0.2A-2A	0.5A-5A	0.8A-8A	1.6A-16A
Measuring current frequency	AC50HZ					
Maximum passing current	1A	2A	5A	8A	12A	22A
Current setting method	Knob setting					
Action delay time	0.1s~10 s					
Power indicator	Green LED					
Setting accuracy	10%					
Current measurement accuracy	5% (0.05-0.5A 为 10%)					
Temperature fluctuation error	<0.1%/°C					
Hysteresis value	5%					
Output	1×SPDT 16A/AC1 250VAC/24VDC					
Minimum switching power	500mW					
Output relay indication	Red LED					
Mechanical life	1×10 <sup>7</sup>					
Electrical life (resistive load)	1×10 <sup>5</sup>					
Operating ambient temperature	-20°C ~+55°C					
Storage and transportation ambient temperature	-35°C ~+75°C					
Installation method	35mm card rail installation					
Protection level	IP20					
Installation location	Arbitrary					
Installation altitude	≤ 2000m					
Pollution level	2					
Wiring ability	1×2.5mm <sup>2</sup> or 2×1.5mm <sup>2</sup> 0.8N·m					
Dimensions	90mm×18mm×65mm					
Weight	67g					
符合标准 Meet the standard	GB/T 14048.5,EN 60255-1					

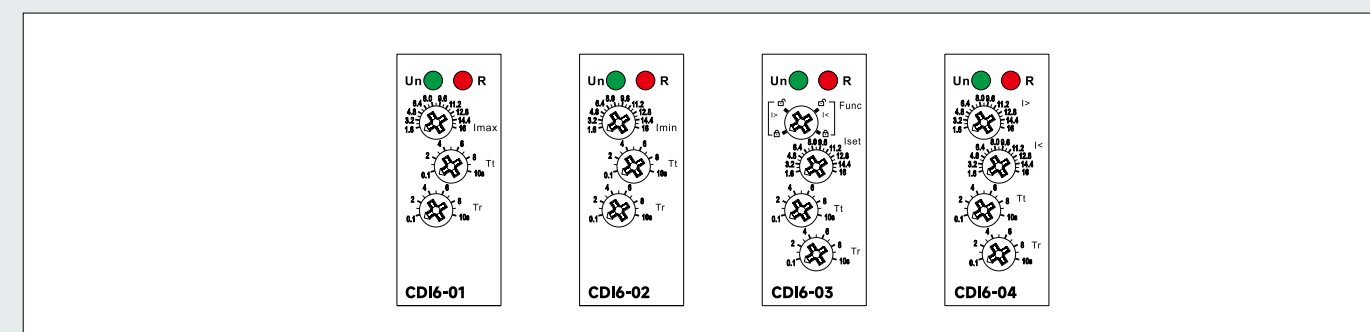
Function diagramw



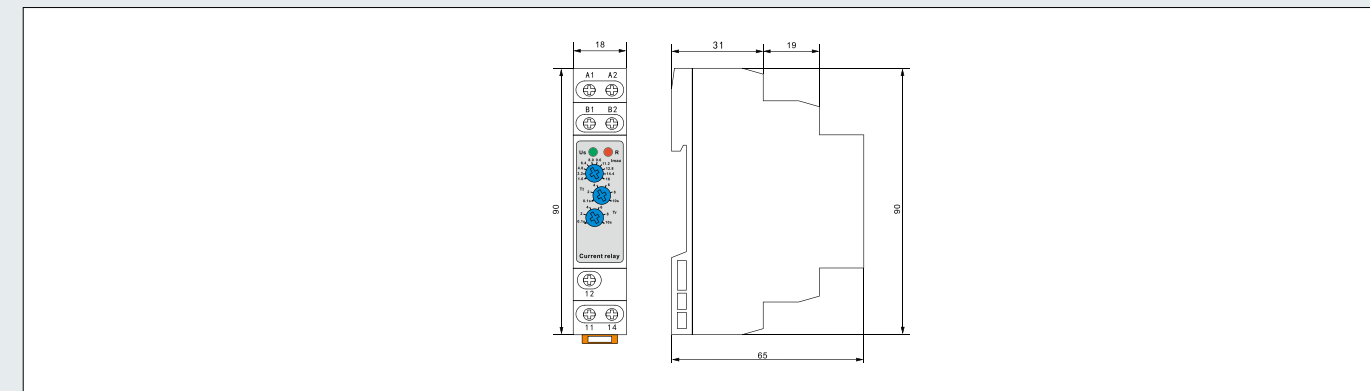
Wiring diagram



Panel diagram



Shape and size (mm)





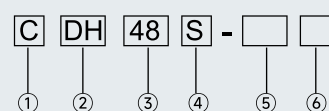
Features

- Multiple working modes
- Multiple intervals control
- Switching power supply is adopted, with wide voltage range
- Terminal type and pin type, double wiring mode, more convenient wiring and maintenance

Model description

CDH48S-1Z:  
A set of time delay relay output, with reset and pause functions;  
CDH48S-2Z:  
Two sets of delay relay output;  
CDH48S-2ZT:  
Two sets of delay relay output, with reset and pause functions;  
CDH48S-S:  
One set of cycle delay with reset pause function;  
CDH48S-2S:  
Two sets of cycle delay;  
CDH48S-2ST:  
Two sets of cycle delay, with reset and pause functions;  
CDH48S-2ZH:  
One group of time delay relay output and one group of instantaneous relay output;

Product selection



Item	Code	Description
① Conduit / connector size	C	CNTD
② Series	DH	Timer Relay
③ Installation dimension	48	W48xH48mm
	72	W72xH72mm
④ Installation mode	S	Panel type, 35mm guide rail type
	M	Panel type
⑤ Working mode	See model description for details	
⑥ 额定电压 Rated voltage	None	100-240VAC
	1	24-48VDC
	2	12VDC
	3	380VAC
	4	12VAC
	5	24VAC
	6	36VAC
	1-9 Digital combination	Custom voltage

Electrical Specification

Display digit	Four digit nixie tube display
Rated voltage	100-240VAC, 50Hz
Work environment	Ambient temperature: - 25 ~ + 70 °C , relative humidity 35 ~ 95% RH (the higher the temperature, the lower the humidity, and there is no water condensation)
Wiring mode	Terminal block
Electric shock capacity	5A AC250V
Repetition error	When the delay range is greater than 1s, er ≤ 1%; When the delay range is less than 1s, Dr ≤ 50ms
Altitude	≤ 2000M
Installation mode	Panel type, 35mm guide rail type

Delay range

CDH48S Default

Switch position	Delay range
H	1M-99H99M
M	1S-99M99S
S	0.01S-99.99S

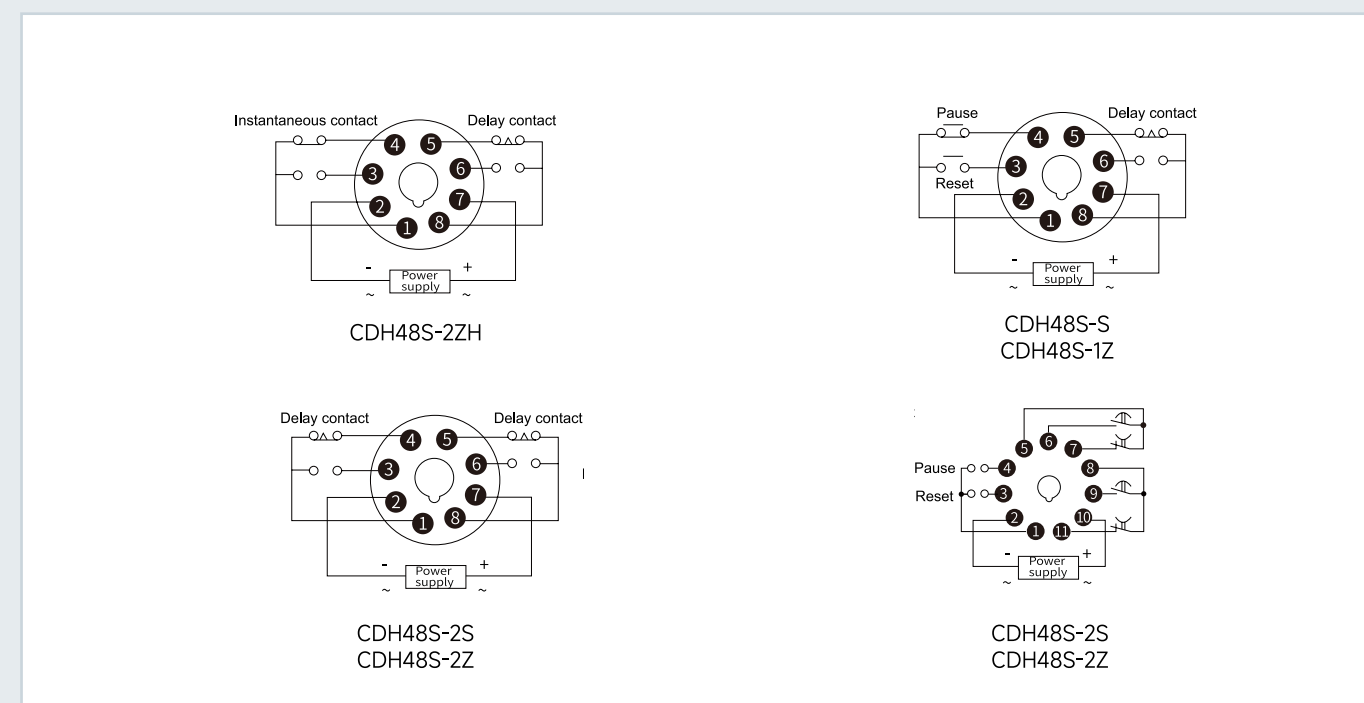
CDH48S-S

Switch position	Delay range
0.1S	0.1S-9.9S
S	1S-99S
0.1M	0.1M-9.9M
M	1M-99M
0.1H	0.1H-9.9H
H	1H-99H
10H	10H-990H

CDH48S Customized

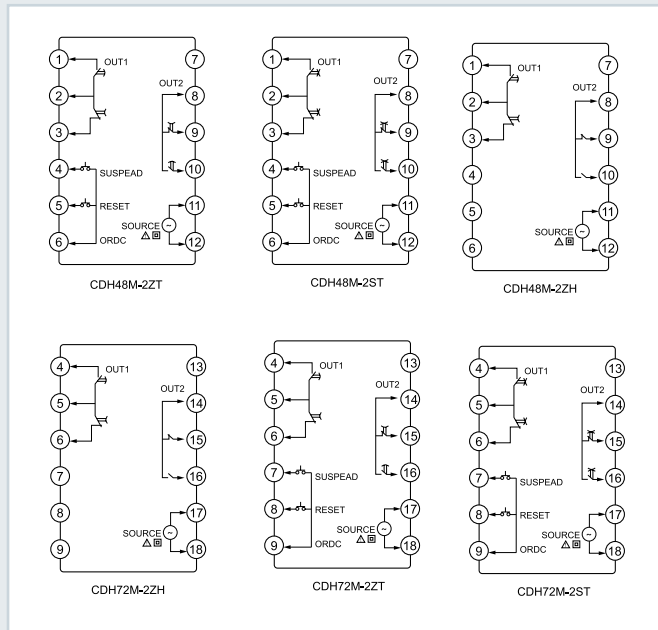
Switch position	Delay range
M/S	1S-99M99S
H/M	1M-99H99M
0.01S	0.01S-99.99S
0.1S	0.1S-999.9S
S	1S-9999S
0.1M	0.1M-999.9M
M	1M-9999M
0.1H	0.1H-999.9H
H	1H-9999H
10H	10H-99990H

Wiring diagram

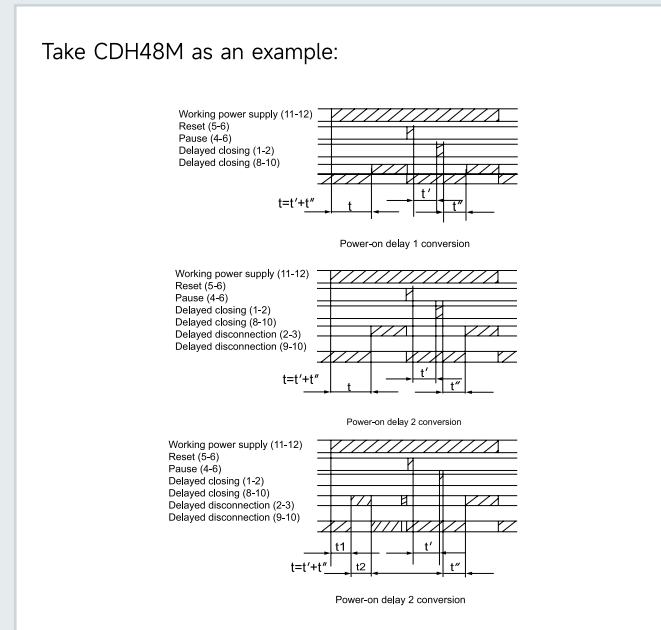




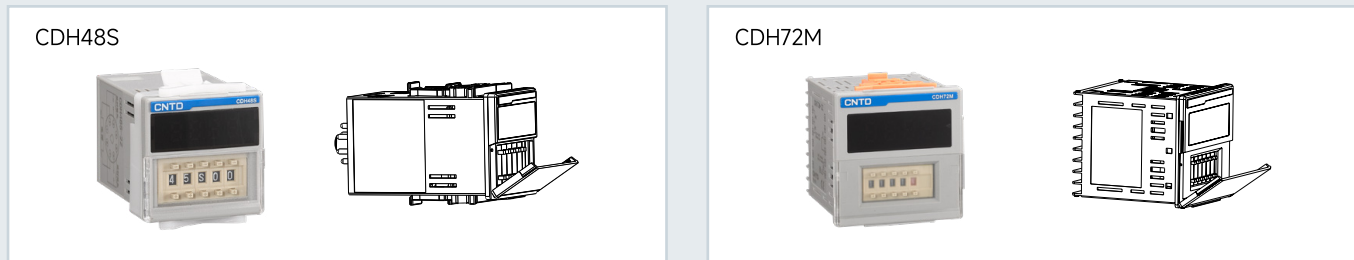
Wiring diagram



Working sequence diagram



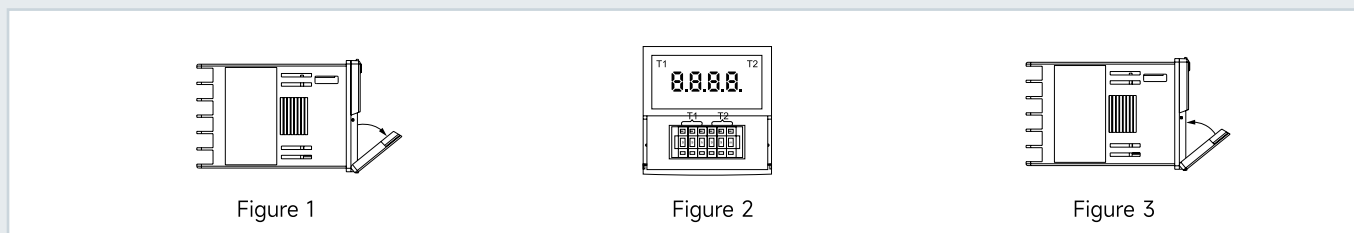
Outline and opening dimension drawing (mm)



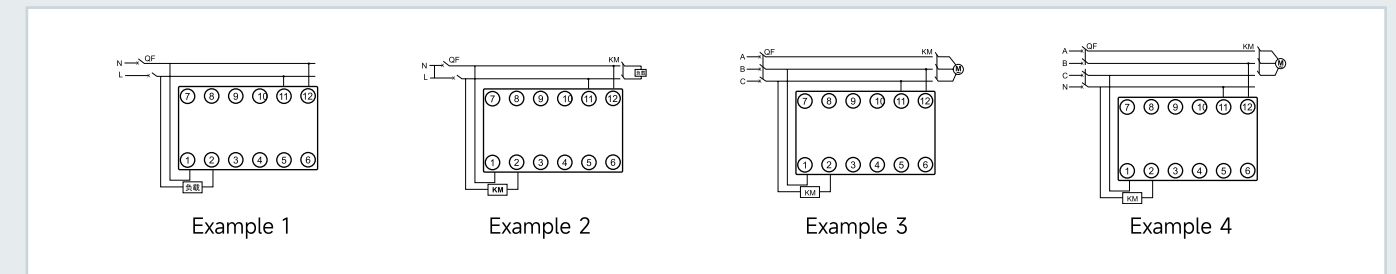
Model	Panel size	Shell size (H x W x L)	Opening size
CDH48S	48x48	48x48x103	45x45
CDH72M	72x72	72x72x81	68x68

Instructions

- Delay setting:
  - Clamp the concave parts on the left and right sides of the cover plate by hand and pull outward (as shown in Figure 1);
  - Set the delay time and time period as required (as shown in Figure 2);
  - After setting, cover the cover (as shown in Figure 3).
- According to the wiring diagram on the label of the time relay housing and the reference circuit, the wiring is correct, and the power supply voltage and frequency must meet the requirements.
- Adjust the dial switch, preset the delay time, turn on the power supply, and the time relay starts to operate according to the working sequence.



- Due to the memory function of the time relay, the delay time shall be preset according to the above figure before power on. The preset time after power on is invalid, and the repeated start interval of the time relay shall be  $\geq 0.5s$ .
- CDH48 □ - 1z Function Description: set the dial switch, turn on the power supply, start timing, reach the preset time, the indicator light in the upper left corner of the display window is on, and the delay contact is switched to realize timing control.
- CDH48 □ - s Function Description: see for delay setting In Figure 2 above, set T1 The time base and preset number of T2, and then turn on the power supply. The two digit nixie tubes on the right display the delay data of T2, and the T2 indicator light is on. When the delay reaches the T2 set value, the time relay acts. At the same time, the two digit nixie tubes on the left display the delay data of T1, and the T1 indicator light is on. When the delay reaches the T1 set value, the time relay releases and T2 starts to delay, so as to realize the cyclic delay control.
- Reset function: turn on the reset terminal at any time, and the time relay will return to the initial state.
- Pause function: in the process of timing, turn on the pause terminal, the timing will stop, and the time at the moment will be displayed. After disconnecting, continue the timing. This function can be used as a timer.
- In strong current environment and long reset and pause termination wires, please use shielded wires.
- Do not input voltage to reset and pause terminals to avoid damaging the product.



- In case of single-phase load, if the load resistive current  $\leq 3A$  or inductive current  $\leq 0.5A$ , the time relay is directly controlled. Refer to example 1 for wiring; If the load resistive current is  $> 3A$  or inductive current is  $> 0.5A$ , the capacity of the time relay is expanded through the AC contactor. Refer to example 2 for wiring; In case of three-phase load, the power supply of AC contactor and time relay is AC380V. Refer to example 3 for wiring; When the power supply of AC contactor and time relay is AC220V, refer to example 4 for wiring.
  - The function of the example time relay is: when the power is connected, the load or km (AC contactor) is powered on. When the time delay reaches the preset value, the load or km (AC contactor) is powered off.
- Note 1: the load can be street lamp or bulb, which can be directly connected to the two lines of the street lamp or bulb port (as shown in example 1).
- Note 2: KM is the coil of AC contactor, A1 Both ends of A2 can be wired according to example 2, example 3 and example 4.
- Note 3: the working power supply of time relay and KM in example 3 is AC380V. Pay attention to the voltage level of the selected product.



Please scan the QR code for detailed usage parameters



### Application

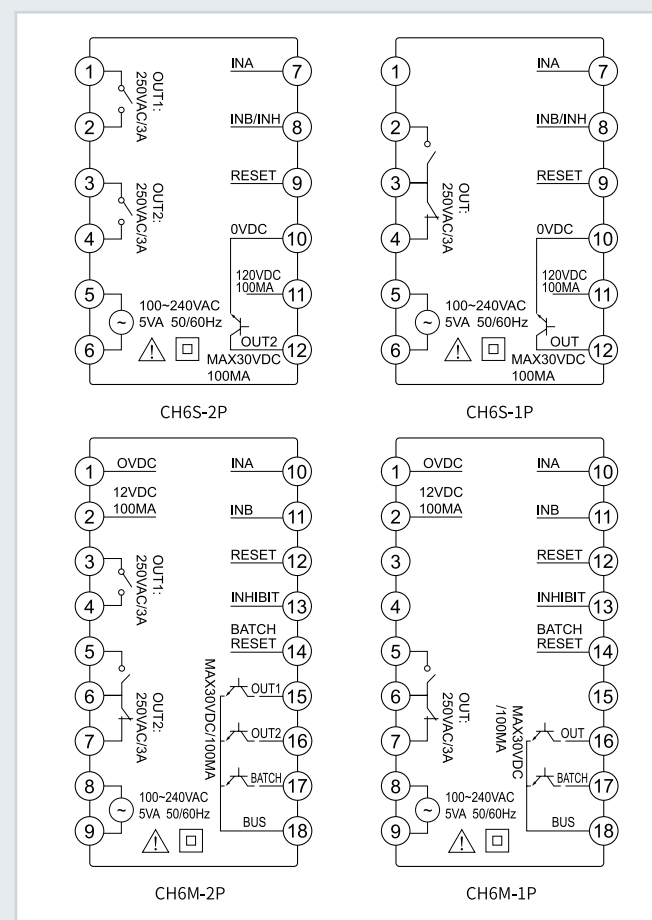
- The timing counter can be used in industrial control occasions. It has two working modes, timing work and counting, and the corresponding functions can be selected according to the use scenario.

### Features

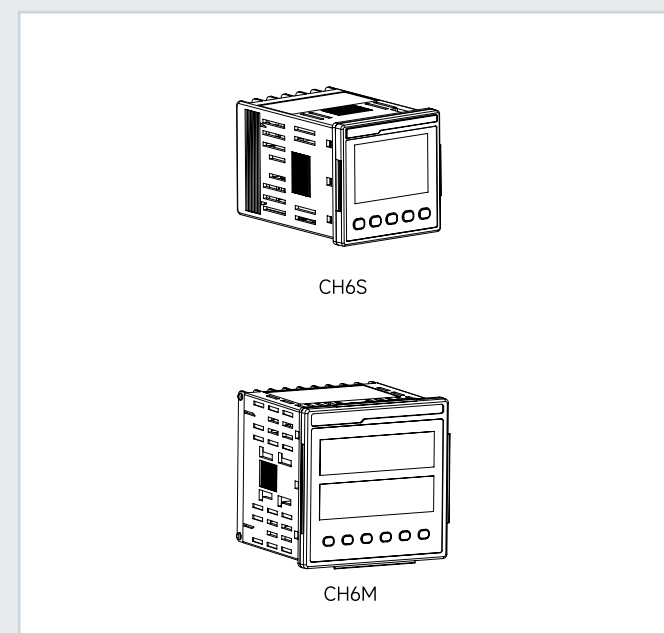
- One-shot output time, in units of 10ms, can be set from 0.01 seconds to 99.99 seconds;
- Counter mode
  - Display range 0.00001-99999.9;
  - 9 input modes and 11 output modes to choose from;
  - BATCH counting, counting initial value setting function;
  - Optional up to 10kCPS input speed;
- Timer mode
  - 12 time range formats are available;
  - 13 output modes are available;
  - Wide time setting range (0.001 seconds-99999.9 hours)
  - Support forward timing and countdown;
- Power-off memory function;



### Wiring diagram

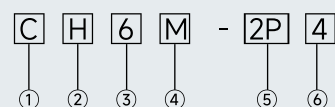


### Dimensions



Model number	Panel size	Shell size (length×width×height)	Opening size
CH6S	48×48	44.3×44.3×81	45×45
CH6M	72×72	67×67×81	68×68

### Product selection



Item	Code	Description
① Company name	C	CNTD
② Series	H	Counter/timer
③ Installation dimension	6	999999
④ Dimensions	S	DIN W48×H48mm
	M	DIN W72×H72mm
⑤ Output	1P	1 stage setting type
	2P	2-stage setting type
⑥ Supply voltage	2	24VAC 50/60Hz 24-48VDC
	4	100-240VAC 50/60Hz

### Electrical Specification

Voltage	AC power supply type	100-240VAC 50/60Hz
	DC power supply type	24VDC
Power consumption		≤ 12VA
INA/INB maximum counting speed		1cps/30cps/1Kcps/5Kcps/10Kcps can be selected
Minimum signal width	Counter	Reset input: 1ms, 20ms optional
	Timer	NA, RESET, INHIBIT, BATCH RESET reset signal: 2ms, 20ms optional
Input method		No voltage input
One-shot output time		Counter, timer, 0.01seconds-99.99 seconds
Memory storage		10 years (non-volatile semiconductor memory)
Wiring method		Terminal block
Use the surrounding humidity		-25~+70°C (not frozen state)
Storage temperature		-30~+80°C (not frozen state)
Humidity		35%-95%RH(Non-condensing state)

### Input mode (counter)

Input mode	Timing diagram	Input mode	Timing diagram
<b>UP</b> (Up)		<b>dn-2</b> (Down-2)	
<b>UP-1</b> (Up-1)		<b>Ud-A</b> (Up/Down-A)	
<b>UP-2</b> (Up-2)		<b>Ud-b</b> (Up/Down-B)	
<b>dn</b> (Down)		<b>Ud-C</b> (Up/Down-C)	
<b>dn-1</b> (Down-1)			



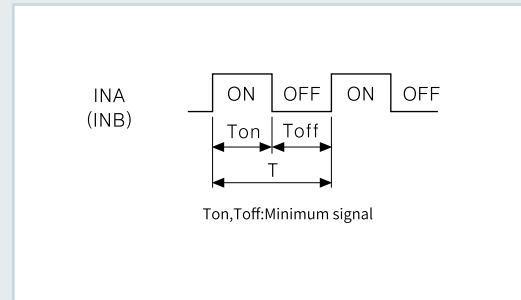
※ Ⓐ is above the minimum signal width and Ⓑ is above 1/2 of the minimum signal width. When it is less than this signal width, a counting error of ±1 may occur.

※The meanings of "H" and "L" in the table below are as follows

	(PNP)	(NPN)
H	5-30VDC	(Short)
L	0-2VDC	(Open)

※The minimum signal width of each counting speed

Counting speed	Minimum signal width
1cps	500ms
30cps	16.7ms
1kcps	0.5ms
5kcps	0.1ms
10kcps	0.05ms



Output mode (counter)

Output mode	Timing diagram			Output mode	Timing diagram		
	Up, Up-1, 2	Down, Down-1, 2	Up/Down A,B,C		Up, Up-1, 2	Down, Down-1, 2	Up/Down A,B,C
<b>F</b> (F)				<b>K</b> (K)			
<b>N</b> (N)				<b>K</b> (K)			
<b>C</b> (C)				<b>Q</b> (Q)			
<b>R</b> (R)				<b>A</b> (A)			

※The OUT output in the 1-stage setting type is the same as the OUT2 output in the 2-stage setting type.

※The OUT1 output can be set to 0 in all output modes, and the corresponding value can be output.

※When the output mode is C (C), R (R), P (P), Q (Q), the OUT2 output cannot be set to 0.

Output mode (counter)

Output mode	Up/Down -A,B,C
<b>S</b> (S)	
<b>T</b> (T)	
<b>D</b> (D)	

※The OUT output in the 1-stage setting type is the same as the OUT2 output in the 2-stage setting type.

※In the 2-stage setting type, OUT1 can choose one-shot output or Hold output mode.

※OUT1 In all output modes, the preset value can be set to 0, and the output is consistent with the state corresponding to the preset value of 0.

※When the output mode is C (C), R (R), P (P), Q (Q), the OUT2 output cannot be set to 0.

Output mode (timer)

Output mode	Timing diagram	Output mode	Timing diagram
<b>OND</b> (OND)		<b>OND.2</b> (OND.2)	
<b>OND.1</b> (OND.1)		<b>FLK</b> (FLK)	
<b>FLK.1</b> (FLK.1)		<b>FLK.2</b> (FLK.2)	
<b>INT</b> (INT)		<b>INT.2</b> (INT.2)	
<b>INT.1</b> (INT.1)		<b>NFD.1</b> (NFD.1)	
<b>NFD</b> (NFD)		<b>INTG</b> (INTG)	